The best-selling Acorn magazine in the world

ACORN USER

Essential for all users of 32-bit RISC OS computers

FULL MULTIMEDIA PRODUCT WORTH £35

MAKING THE FUTURE A REALITY

Revealed – what's really happening at Acorn

- Top-level Acorn interviews
- NChannel & the NetStation
- Vote in the Acorn User Awards
- Presentation software reviewed
- New joystick interface

OCTOBER 1996 ACORN USER **Cover Disc 2**



HILIGHTER
from
SHERSTON SOFTWARE
the complete package

CHECKED • VIRUS CHECKED • VIRUS CHECKED • VIRUS CHECKED • VIRUS CHE

OCTOBER 1996 ACORN USER **Cover Disc 1**

Save the Gweeks

Superb arcade action game over 40 levels



Plus
- More on HTML
- Mike Cook's pseudo User Port
- Programming in C
- The *INFO selection

CHECKED • VIRUS CHECKED • VIRUS CHECKED • VIRUS CHECKED • VIRUS CHE

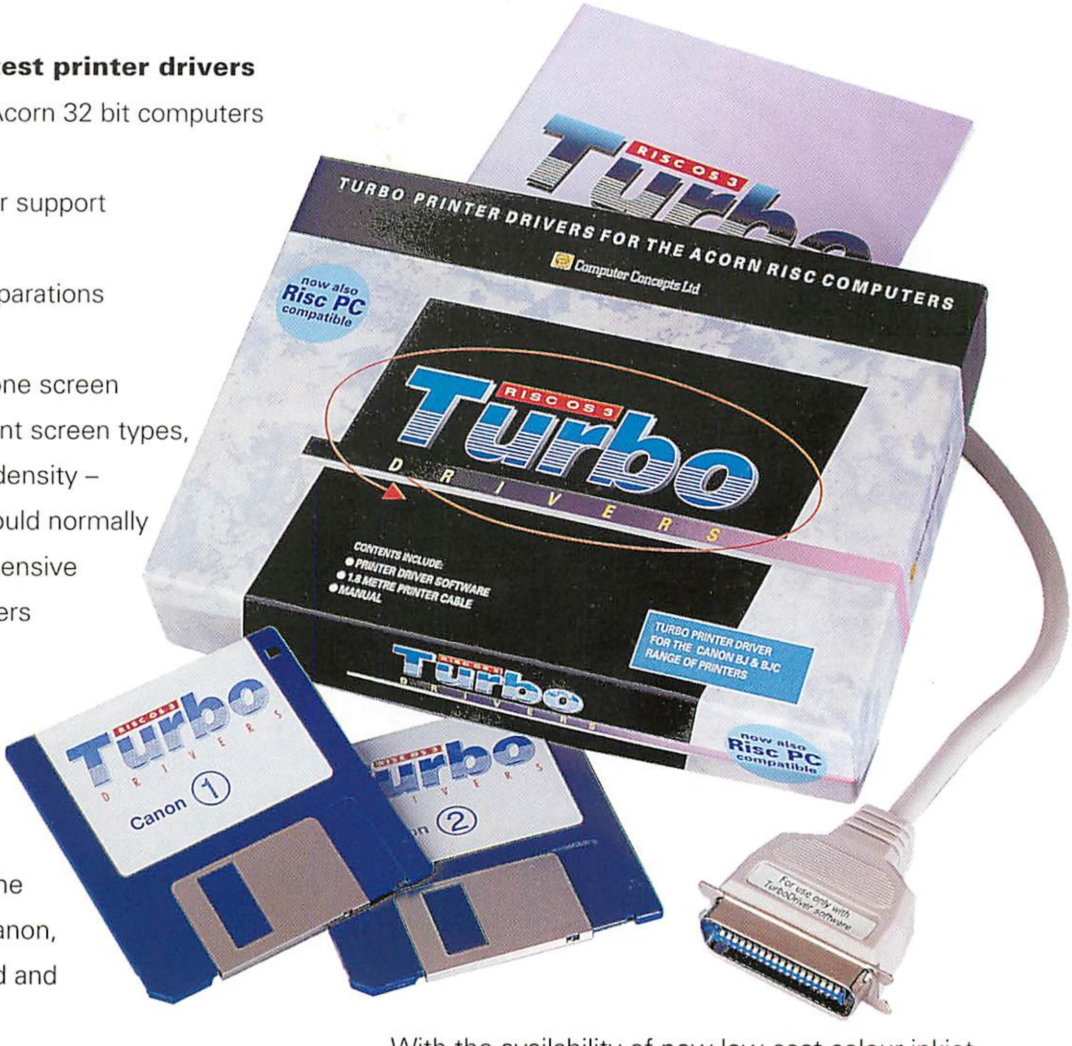
October 1996 | Issue 173 | £3.75
IDG MEDIA
10>
9 770263 745987

The **Fastest** Printer Drivers Available

RISC OS 3 Turbo DRIVERS

TurboDrivers – a range of **exceptionally fast RISC OS printer drivers**, optimised for a wide range of popular mono and colour printers from Canon, Hewlett Packard and Epson.

- Simply the **fastest printer drivers available** for Acorn 32 bit computers
- Full 24 bit colour support
- 3 or 4 colour separations
- Extensive halftone screen control – different screen types, angles, screen density – features you would normally only find on expensive PostScript printers
- Print from file entirely in the background
- Support for all the most popular Canon, Hewlett Packard and Epson printers
- Diffused dither option to produce near-photo quality bitmap printing



With the availability of new low cost colour inkjet printers and the increasing use of colour in printed documents, there is now even more reason to use TurboDrivers than ever before.

TurboDrivers RRP: £49 + VAT (£57.57 inc.)

Requires RISC OS 3.1 or later and !Printers 1.45 or later, 2Mbyte RAM for mono work and 4 Mbyte for colour work. Hard disc recommended. TurboDrivers are available for Canon, HP Deskjet/LaserJet and Epson Stylus printers. Please state printer make and model when ordering. Site licences and network spoolers are available. Computer Concepts can also supply Canon BJC-210, BJ-230, BJC-610, BJC-70 & BJC-4100 bubblejet printers with TurboDrivers - please ask for details.

Computer Concepts Ltd

Gaddesden Place, Hemel Hempstead, Herts, HP2 6EX Tel: 01442 351000 Fax: 01442 351010
Email: info@cconcepts.co.uk http://www.cconcepts.co.uk

CONTENTS

Editor's letter

I know we're not supposed to count our chickens before they've hatched but I just can't help it. These are nice healthy, promising eggs and even though the motherhen has laid some really duff eggs in the past I really think it's got itself together this time.

In fact if I were a betting man I'd lay down some money that the motherhen was capable of laying golden eggs given a chance — well, silver anyway.

At least people have stopped saying that the motherhen is dead or dying. It had been pretty ill up to about a year ago and even I was concerned for its future, I didn't think it was actually going to die but a long drawn-out period of ill-health did seem likely.

But now, almost miraculously, it's sprung back to life and is laying some quite superb eggs which promise a clutch of very healthy chickens. Looks like the farm might be flourishing again.

Steve Turnbull

Managing Editor Pam Turnbull
Editor Steve Turnbull
Production Editor Alan McLachlan
Art Editor Alan Capper
Assistant Editor Karen Peach
Contributing Editors
Ian Burley (News) Steve Mumford (Games) Jack Kreindler (Graphics) David Dade (Comms) Paul Wheatley (Public Domain) Geoff Preston (Education) Graham Nelson (Games) Mike Tomkinson (Business) Mark Taylor (Portables)
Advertisement Manager Lisa-Jo Oliver
Ad Production Barbara Newall
Helen Weaver
Ad Typesetting Eddie Burke
Marketing Manager Steve Tagger
Marketing Assistant Gary Russell
Production Manager Judith Chapman
Commercial Director Denise Wright
Circulation Director David Wren
Distribution COMAG (01895) 444055
Subscriptions & Back Issues
Database Direct 0151-357 1275
Email: database@dbdirect.demon.co.uk
Managing Director Ian Bloomfield
Cover Alan Capper

Member of the Audit Bureau of Circulation
Acorn User is an independent publication and Acorn is not responsible for any of the articles in this issue or for any of the opinions expressed.

IDG MEDIA

Published by IDG Media Ltd, Media House, Adlington Park, Macclesfield SK10 4NP
e-mail aueditor@idg.co.uk
http://www.idg.co.uk/acornuser/
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Duncan Web Offset, Maidstone

13 issue subscription rate: £39.99 (UK), £53.99 (EU), £68.99 (World)

REGULARS

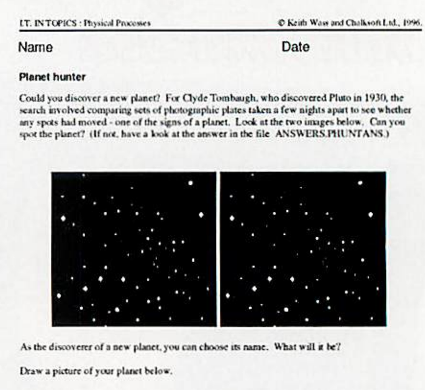




HANDS ON



EDUCATION



I.T. IN TOPICS : Physical Processes © Keith Wass and Chalksoft Ltd., 1996.

Name Date

Planet hunter

Could you discover a new planet? For Clyde Tombaugh, who discovered Pluto in 1930, the search involved comparing sets of photographic plates taken a few nights apart to see whether any spots had moved - one of the signs of a planet. Look at the two images below. Can you spot the planet? (If not, have a look at the answer in the file ANSWERS.PHUNTANS.)

As the discoverer of a new planet, you can choose its name. What will it be?

Draw a picture of your planet below.



October 1996

REVIEWS



SPECIAL OFFERS

Win tickets to go on a Granada Studios tour -
see page 45



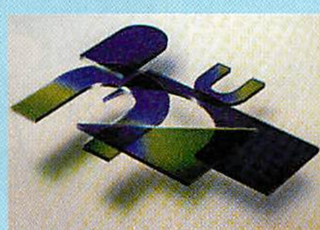
FEATURES

NetStation









Next month in Acorn User

The Acorn World Show will soon be upon us and in the next issue we'll be presenting the initial stand-by-stand guide to perhaps the most important Acorn show in the company's entire history.
Plus all the best features, hands-on and reviews.

NEXT ISSUE ON SALE 3 OCTOBER

ICS

0151-625 1006

Bargains

– LIMITED STOCKS –

– Please telephone us before sending money –

A3000 Case for Expansion Card *Watford £22.33* £19
Access+ for Risc PC, special offer *Acorn £105.75* £90
Citizen Swift 24 Printer, ex-demonstration *£146.88* £125
Craftshop 2, special offer, age 7+ *4Mation £14.10* £12
Eidoscope *CC £135.13* £115
Epson GQ-5000 Printer, second-hand *£176.25* £150
Epson LQ-2500+ Printer, second-hand *£176.25* £150
Landmarks - Elizabeth I, KS2,3 *Longman £14.10* £12
Landmarks - The Civil War, KS2,3 *Longman £17.63* £15
Mouse for Acorn *£18.80* **£16**
Play It Again Sam 1, special offer *Superior £14.10* £12
Quest for Gold *Krisalis £11.75* £10
Sleuth 1.5, special offer *Beebug £41.13* £35
SolidsRENDER, special offer *Silicon £69.33* £59
Xenon 2, special offer *Eclipse £10.58* £9

Arcturus *£11.75* £10 • Chartwell *£16.45* £14
1 Mb VRAM *£57.58* £49 • Craftshop 1 *£14.10* £12
Heimdall *£18.80* £16
Fun School 4, age 5-7 *£16.45* £14
Magic Pockets *£14.10* £12 • Zarch *£9.40* £8
Landmarks – The Aztecs *£17.63* £15
Landmarks – Rain Forest *£17.63* £15
Nebulus *£11.75* £10 • Prophet version 1 *£92.83* £79

PC software

Hutchinson Encyclopedia 1996 CD for PC *Attica £47.00* £40
Windows for Workgroups 3.11 *Microsoft £76.38* £65

CD rom software

19th Century Biographies, KS2,3 (needs Keynote/Key Plus) *Anglia £28.20* £24
Art in the National Curriculum, KS1-3 *AVP £56.40* £48
ArtWorks CD *CC £115.15* £98
Bitfolio 6 CD *Longman £34.08* £29
Bitfolio 7 CD *MGL £48.18* **£41**
Breakaway Maths, age 7-12 *YITM £75.20* £64
British Isles from the Air, KS2-4 *Anglia £45.83* £39
Britain Since 1930 (Anglia), KS2,3 (needs Keynote/Key Plus) *Anglia £28.20* £24
British Birds, age 7-16 *YITM £116.33* £99
Cars - Maths in Motion CD, age 8+ *Cambs Soft £57.58* £49
CD Français (YITM), age 11-16 *YITM £51.70* £44
Clip Art Collection (Zenta) *Zenta £28.20* £24
Clip-Art CD 1 *CC £21.15* £18
Clip-Art CD 2 *CC £21.15* £18
Counties of the British Isles, KS2-4 (needs Keynote/Key Plus) *Anglia £45.83* £39
Countries of the World, KS2-4 (needs Keynote/Key Plus) *Anglia £45.83* £39
Dictionary of the Living World *Media £49.35* £42
Dinosaurs! The Multimedia Encyclopedia *Media £49.35* £42
Dune II CD *Eclipse £44.65* **£38**
Earth and Atmosphere, KS2,3 *AVP £79.90* £68
Environment Series 1: Land and Air, age 11-16 *YITM £91.65* £78
Environment Series 2: Water, age 11-16 *YITM £91.65* £78
Exploring Castles, KS2,3 *Anglia £45.83* £39
Font Emporium *Zenta £28.20* £24
Frontier 2000 CD rom, KS2-4 *Cambs Soft £92.83* £79
Garden Wildlife, KS2 *Anglia £45.83* £39
Ghosts *Media £49.35* £42
Granny's Garden CD, KS1,2 *4Mation £32.90* £28
Guardians of the Greenwood, KS2,3 *4Mation £57.58* £49
History of Inventions *Anglia £45.83* £39
Hutchinson Multimedia Encyclopedia (shrink-wrapped) *Attica £29.38* £25
Inventors and Inventions, age 9-14 *YITM £175.08* £149
Kid Pix 2 CD, KS1,2 *ESM £49.35* £42
Kingfisher Children's Micropedia, KS1-3 *ESM £101.05* £86
Magpie CD *Longman £71.67* £61
Meteosat Collection Photo CD *Spacetech £39.95* £34
Multimedia for Schools *Anglia £86.95* £74
Naughty Stories Volumes 1 and 2 (set of 12) CD, age 5-7 *Sherston £95.18* £81
Nelson and His Navy, KS2,3 *Anglia £57.58* £49
PDCD-1 *Datafile £23.50* £20
PDCD-2 *Datafile £23.50* £20
PDCD-3 *Datafile £23.50* £20
Photobase Decades: The 1960s *Longman £59.93* £51
Photobase Decades: The Victorians *Longman £59.93* £51
Photobase: Science *Longman £59.93* £51
PicturePoint CD, KS1,2 *Longman £35.25* £30
Robert Duncan Cartoon Kit *MGL £48.18* £41
Romans! *Anglia £45.83* £39
Science Series 1: Elements, age 14-16 *YITM £91.65* £78
Science Series 2: Materials, age 14-16 *YITM £91.65* £78
Science Series 3: Electricity and Magnetism, Primary, age 7-16 *YITM £68.15* £58
Science Series 3: Electricity and Magnetism, Secondary, age 7-16 *YITM £91.65* £78
Science Series Double Pack, age 14-16 *YITM £138.65* £118
Shareware CD *Zenta £28.20* £24
Simon the Sorcerer CD *GamesW £39.95* £34
SuperPack (Bitfolio 7 + Robert Duncan Cartoon Kit) *MGL £88.13* £75
Survival's Mysteries of Nature *Anglia £45.83* £39
Understanding Energy, KS3 *Anglia £57.58* £49
Understanding the Body, KS3 *Anglia £45.83* £39
Up and Away, age 9-14 *Sherston £57.58* £49
Vikings! (Anglia), KS2 *Anglia £45.83* £39
World of Robert Burns, age 8+ *Cambs Soft £92.83* £79
World's Weather, KS3 *Anglia £57.58* £49
World War II - On the Home Front, KS2,3 (needs Keynote/Key Plus) *Anglia £28.20* £24

Other software

10 out of 10 Dinosaurs *10/10 £14.10* £12
10 out of 10 Driving Test *10/10 £14.10* £12
10 out of 10 Early Essentials, age 3-7 *10/10 £14.10* £12
10 out of 10 English, age 6-16 *10/10 £14.10* £12
10 out of 10 English (Foreign Language) *10/10 £14.10* £12
10 out of 10 Essential Maths, age 5-12 *10/10 £14.10* £12
10 out of 10 Essential Science, age 5-12 *10/10 £14.10* £12
10 out of 10 French, age 8-16 *10/10 £14.10* £12
10 out of 10 German, age 8-16 *10/10 £14.10* £12
10 out of 10 Junior Essentials, age 5-11 *10/10 £14.10* £12
10 out of 10 Maths Number, age 6-16 *10/10 £14.10* £12

Selected prices 9th August 1996

10 out of 10 Structured Spelling, age -9 *10/10 £14.10* £12
2067 BC *Oregan £17.63* £15
Acorn Companion *SEMERC £11.00* VO£11
Acorn Companion 2 for Risc PC and A7000 *SEMERC £11.00* VO£11
ACross *Kudos £24.68* £21
Advance *Acorn £115.15* £98
Advance SLP SLP *Acorn £232.65* £198
Advance SLS SLS *Acorn £569.88* £485
Advance User Guide *Acorn £14.00* VO£14
Advantage, KS2,3 *Longman £59.93* £51
Adventure Playground, age 5-8 *Storm £22.33* £19
Alone in the Dark *Krisalis £32.90* **£28**
Amazing Maths, KS1-4 *Cambs Soft £22.33* £19
Anagram Genius *Fourth £18.80* £16
Ancestry II *Minerva £89.30* £76
Animated Numbers, age 3-6 *Sherston £24.68* £21
Animator *Clares £24.68* £21
ANT Internet Suite *Ant £115.15* **£98**
Apollonius PDT *Oak £164.50* £140
ArcFax *Pilling £32.90* £28
ArcFS 2 *VTI £23.50* £20
ArchiTech *Aspex £184.48* £157
ArchiTech SL SL *Aspex £574.58* £489
Arcventure I ... The Romans, age 10-12 *Sherston £32.90* £28
Arcventure II ... The Egyptians, age 8-11 *Sherston £32.90* £28
Arcventure III ... The Vikings, KS2 *Sherston £32.90* £28
Arcventure IV ... The Anglo Saxons, age 8-11 *Sherston £38.78* £33
Around the World in 80 Days, age 9-12 *Sherston £43.48* £37
ArtWorks FD *CC £115.15* £98
Artworks Tutorial Video *Pineapple £19.98* £17
ArtWorks Made Easy *Dabs £7.00* VO£7
Audio Mixer *Yellowstone £34.08* £29
AudioWorks *CC £44.65* £38
Aztecs, age 7-11 *Sherston £47.00* £40
Badger Trails, KS2 *Sherston £47.00* £40
Balloons, KS1 *Topolog £19.98* £17
Balloons (Izzy and Lizzy), KS1 *Topolog £19.98* £17
Banner II *Kudlian £34.08* £29
BBC Basic Reference Manual *Acorn £25.00* VO£25
Beginning to Read, age 5-7 *Sherston £45.83* £39
Betsi, KS2 *4Mation £37.60* £32
Big Bang *Psycore £14.10* £12
Big Picture *Longman £84.60* **£72**
Birds of War (not Risc PC) *Fourth £27.03* £23
Birds of War for Risc PC *Fourth £27.03* £23
Black Angel *Fourth £25.85* £22
Blinds *Quantum £24.68* £21
Bodywise, age 9-14 *Sherston £43.48* £37
Break 147 & Superpool (not Risc PC) *Fourth £25.85* £22
Break 147 & Superpool for Risc PC *Fourth £25.85* £22
Budget DTP *Dabs £7.00* VO£7
Burn 'Out *Oregan £23.50* £20
C Version 2 *Dabs £7.00* VO£7
C Version 3 *Dabs £7.00* VO£7
CADet, KS3,4 *Minerva £56.40* £48
Calabash Pirates, age 7-11 *Storm £24.68* £21
Cannon Fodder limited offer *Krisalis £19.98* **£17**
CardShop *Clares £22.33* £19
Carnage Inc. (not Risc PC) *Fourth £21.15* £18
Carnage Inc. for Risc PC *Fourth £21.15* £18
Cartoon Graphics Library *Micro S £17.63* £15
Castle of Dreams, age 7-11 (not Risc PC) *Storm £23.50* £20
C/C++ *Acorn £247.93* £211
CDtracker *Werewolf £14.10* **£12**
CDtracker Plus *Werewolf £23.50* £20
Celebration *Clares £32.90* £28
Chameleon, age 7+ *4Mation £38.78* £33
ChessII *Pilling £16.45* £14
Chocks Away Compendium *Fourth £28.20* £24
CineWorks *Oregan £151.58* £129
Classcardz for Resultz *Colton £23.50* £20
Classcardz for Wordz *Colton £23.50* £20
ClickArt Animals & Nature *Matt Black £32.90* £28
ClickArt Sports & Games *Matt Black £32.90* £28
Clockwise, KS1-3 *4Mation £28.20* £24
Cobalt Seed *TBA £23.50* **£20**
ColorMobile Software Driver *Irlam £56.40* £48
Command Ship *TBA £23.50* £20
Complete Animator *Iota £94.00* £80
Composition (Risc PC only) *Clares 98.70* £84
Compression *CC £34.08* £29
Creator II *Alpine £54.05* £46
Crystal Maze age 7+ *Sherston £29.38* **£25**
Crystal Rain Forest FD, KS2 *Sherston £42.30* £36
Cyber Ape *TBA £19.98* £17
Cyber Chess *Fourth £25.85* £22
Darkwood *Eclipse £23.50* **£20**
Darryl the Dragon, KS1,2 *4Mation £21.15* £18
DataPower *Iota £115.15* £98
Dazzle! *SEMERC £56.40* £48
Demon's Lair *Fourth £21.15* £18
DeskEdit 4 *Beebug £29.38* £25
Desktop ScreenTurtle, KS1-3 *Topolog £49.35* £42
Desktop Thesaurus *Beebug £21.15* £18
DiagramIt *Dalriada £49.35* £42
Digital Symphony *Oregan £54.05* £46
Digital Symphony + CD Rom *Oregan £69.33* £59
Dinosaur Discovery, KS2 *4Mation £29.38* £25
Disc Rescue *LOOK £32.90* £28
DrawBender *ICS £11.75* £10
DRAW_Changer v2 *DEC_dATA £24.68* £21
Draw Print & Plot *Oak £32.90* £28
DrawWorks2 *iSV 19.98* £17
Dune II FD *Eclipse £31.73* £27
Dungeon (not Risc PC) *Fourth £28.20* £24
Dungeon for Risc PC *Fourth £28.20* £24
E-Type 2 (not Risc PC) *Fourth £29.38* £25
E-Type 2 for Risc PC *Fourth £29.38* £25
E-Type Compendium *Fourth £21.15* £18
Earthwarp, KS2 *Longman £30.55* £26
Easy C *Beebug £64.63* £55
Easy C++ *Beebug £104.58* £89
EasyClip *Fabis £34.08* £29
EasyFont 3 *Fabis £31.73* **£27**
Eclipse Collection *Eclipse £23.50* £20
Elf Tales, age 5-7 *Sherston £37.60* £32
Eureka 3, KS2,3 *Longman £106.93* £91
Eye for Spelling, KS1,2 *ESM £36.43* £31
FIRE & ICE *Renegade £17.63* **£15**
Fireworkz *Colton £103.40* £88
Fireworkz Pro *Colton £163.33* £139
First Logo, KS1,2 *Longman £29.38* £25
First Page, KS2-4 *Longman £59.93* £51
First Words with Smudge, age 4+ *Storm £23.50* £20
FistLore *Mystery £24.68* £21
Flight Path, age 9+ *Storm £28.20* £24
Flossy the Frog, KS1 *4Mation £27.03* £23
Flossy the Frog Art Disc *4Mation £11.75* £10
Fontasy *ICS £17.63* £15
Fontasy/DrawBender/Placard *ICS £35.25* **£30**
Font Designers Toolkit *iSV £28.20* £24
Font Directory 2 *LOOK £43.48* **£37**
FontFX *Data Store £10.58* £9
Font Pack 277 *iSV £23.50* £20
Font Pack 298 *iSV £23.50* £20
Font Packs 277 and 298 *iSV £34.08* £29
Formula Two Thousand *TBA £23.50* £20
Formulix *CC £75.20* £64



Freddy's Adventure, KS1 *Topolog £19.98* £17
Freddy Teddy, KS1 *Topolog £19.98* £17
Frontier 2000 FD, KS2-4 *Cambs Soft £45.83* £39
Full Phase *SEMERC £44.65* £38
Full Phase + 2 *SEMERC £56.40* £48
Genesis Professional *Oak £131.60* £112
Genesis Project *Oak £55.23* £47
Geordie Racer, KS2 *Longman £30.55* £26
Giant Killer, KS2,3 *Topolog £22.33* £19
Global Effect *Eclipse £31.73* **£27**
Gothic & Medieval Fonts and Decoration Pack 1 *Datafile £35.25* £30
Gothic & Medieval Fonts and Decoration Pack 2 *Datafile £37.60* £32
Granny's Garden FD, KS1,2 *4Mation £27.03* £23
Graphics Loaders *CC £42.30* £36
Graphics on the ARM Machines *Dabs £7.00* VO£7
Hard Disc Companion 2 *Beebug £51.70* £44
Hatchback, age 7+ *4Mation £37.60* £32
Haunted House *Fourth £23.50* £20
Hearsay II *Beebug £69.33* £59
HeroQuest *Krisalis £25.85* £22
High Risc Racing for Risc OS 3.1 *Modus £23.50* £20
High Risc Racing for Risc OS <3.1 *Modus £23.50* £20
Holed Out Compendium *Fourth £21.15* £18
Home Accounts *Minerva £31.73* £27
HyperStudio *TAG £115.15* **£98**
Illusionist *Clares £47.00* £40
ImageBank *Irlam £28.20* £24
ImageFS 2 *Alternative £45.83* £39
ImageMaster *Pilling £28.20* £24
Image Outliner *Iota £54.05* £46
Impression (Dabs) *Dabs £7.00* VO£7
Impression Publisher *CC £135.13* **£115**
Impression Publisher Plus *CC £267.90* £228
Impression Publisher Resource Disc *DEC_dATA £12.93* £11
Impression Style *CC £88.13* **£75**
Impression Style Resource Disc *DEC_dATA £12.93* £11
Impressive *Quantum £14.10* £12
Interdictor 2 *Clares £18.80* £16
InterTalk *Acorn £91.65* £78
InterTalk SL SL *Acorn £346.63* £295
Investigator IV *VTI £49.35* £42
James Pond 2 + (not Risc PC) *Eclipse £19.98* £17
James Pond - Underwater Agent / Running Water, KS1-4 *SkillsW £32.90* £28
Junior Database, KS1-3 *Iota £52.88* £45
Junior PinPoint, KS1,2 *Longman £35.25* £30
Junior Sibelius! KS1,2 *Sibelius £56.40* **£48**
Jurassic Clipart *Micro S £17.63* £15
Key Author *Anglia £63.45* £54
Keynote 2.0 *Anglia £31.73* £27
Key Plus 3.0 *Anglia £69.33* £59
Keystroke *Quantum £32.90* £28
Kid Pix, KS1,2 *ESM £31.73* £27
Kid Pix 2 FD, KS1,2 *ESM £45.83* £39
Landmarks - Columbus, KS2,3 *Longman £30.55* £26
Landmarks - Egypt, KS2,3 *Longman £30.55* £26
Landmarks - Second World War, KS2,3 *Longman £30.55* £26
Landmarks Datafile Britain Since 1930, KS2,3 *Longman £16.45* £14
Landmarks Datafile Looking at the World, KS2,3 *Longman £16.45* £14
Landmarks Microworlds - The Victorians, KS2,3 *Longman £30.55* £26
Logic Gates & Counters, KS2,3 *Camboard £14.10* £12
Look! Hear! Talking Topics (set of 6), age 5-7 *Sherston £64.63* £55
Lotus Turbo Challenge 2 (not Risc PC) *Krisalis £21.15* £18
LRTV *Longman £30.55* £26
MacFS *CC £99.88* £85
MacFS Light *CC £52.88* £45
Magic Maths *Creative £29.38* £25
Magnetoids *Oregan £23.50* £20
Magpie FD *Longman £71.67* £61
Masterfile 3 *Beebug £52.88* £45
Mathematics Through WinLogo, KS3 *Longman £35.25* £30
MathMania, KS2-4 *Topolog £28.20* £24
Mathsbook *Topolog £28.20* £24
Maths Card *Creative £56.40* £48
Maths Circus, KS1-3 *4Mation £29.38* £25
Maths Odyssey *Comp Tut £47.00* £40
Merp / Mirror Image *TBA £19.98* £17
Midi Box *Topolog £28.20* £24
Midi Synthesizer (needs 16-bit sound) *ESP £44.65* £38
Mission: Control - Crystal Rain Forest 2, age 7-11 *Sherston £50.53* £43
Morpheus *Oregan £41.13* £35
Mouse in Holland, KS1,2 *4Mation £32.90* £28
Music Box, KS1,2 *Topolog £37.60* £32
Music Studio 32 *Longman £96.35* **£82**
My World 2 *SEMERC £44.65* £38
Naughty Stories Volume 1 (set of 6) FD, age 5-7 *Sherston £51.70* £44
Naughty Stories Volume 1 Books, age 5-7 *Sherston £14.00* VO£14
Naughty Stories Volume 2 (set of 6) FD, age 5-7 *Sherston £51.70* £44
Navigator, KS2-4 *Topolog £39.95* £34
Network Acorn *SEMERC £11.00* VO£11
NightSky *Clares £71.67* £61
Noot, age 4-12 *4Mation £48.18* £41
Notate, KS2-4+ *Longman £71.67* £61
Nstore 4D *H.S. £43.48* £37
Numbertime, KS1 *Longman £30.55* £26
Oak PCB II *Oak £77.55* £66
Occasion *ExpLAN £68.15* £58
Oh No! More Lemmings (requires Lemmings) *Krisalis £17.63* £15
OmniClient *Acorn £287.88* £245
Orrery *Spacetech £69.33* £59
Ovation Pro *Beebug £191.53* **£163**
Ovation Resource Disc *DEC_dATA £9.40* £8
Oxford Reading Tree Stage 2 More Talking Stories A, age 5-7 *Sherston £41.13* £35
Oxford Reading Tree Stage 2 Story Books, age 5-7 *Sherston £9.00* VO£9
Oxford Reading Tree Stage 2 Talking Stories FD, age 5-7 *Sherston £41.13* £35
Oxford Reading Tree Stage 2 Wrens Talking Stories, age 5-7 *Sherston £45.83* £39
Oxford Reading Tree Stage 3 More Talking Stories A, age 5-7 *Sherston £41.13* £35
Oxford Reading Tree Stage 3 Story Books, age 5-7 *Sherston £9.00* VO£9
Oxford Talking Infant Atlas FD, KS1 *Sherston £22.33* £19
Parish Magazine Clip Art Collection *DEC_dATA £18.80* £16
Party, Wedding & Anniversary Collection *DEC_dATA £15.28* £13
PC x86 Software *Acorn £12.93* £11
PenDown, KS1-3 *Longman £65.80* £56
PenDown DTP *Longman £68.15* £58
PenDown Etoiles, KS3,4 *Longman £65.80* £56
PenDown Plus, KS2-4 *Longman £96.35* £82
Personal Accounts V3 *Apricote £43.48* £37
Phases - Ancient Egyptians *SEMERC £32.90* £28
Photodesk *Spacetech £184.48* **£157**
PicturePoint FD, KS1,2 *Longman £35.25* £30
PinPoint 2, KS3,4 *Longman £92.83* £79
PinPoint Datafile Animal Kingdom, KS2,3 *Longman £16.45* £14
PinPoint Datafile Diet and Nutrition, KS3,4 *Longman £16.45* £14
PinPoint Datafile Second World War, KS3,4 *Longman £16.45* £14
PinPoint Datafile Solar System, KS3,4 *Longman £16.45* £14
Placard *ICS £11.75* £10
Plantwise, age 9-14 *Sherston £49.35* £42

Playdays, age 3-8	SkillsW	£24.68	£21
Playground, KS1	Topolog	£24.68	£21
Plot	Clares	£74.03	£63
Podd, KS1,2	ESM	£22.33	£19
Prehistoric Animals Graphics	Micro S	£17.63	£15
Primary Teachers Clip Art Starter Set	DEC_dATA	£15.28	£13
PrimeSolver Full version, KS1-4	Minerva	£57.58	£49
ProArtisan 24 (Risc PC only)	Clares	98.70	£84
ProCAD, KS4	Minerva	£292.58	£249
Prophet 2	Apricote	£168.03	£143
PublishArt Release 2, Artworks format	Smart	£34.08	£29
PublishArt Release 2, Draw format	Smart	£34.08	£29
Puddle, KS1	Topolog	£19.98	£17
QuicKey	ICS	£11.75	**£10**
Rainbow, KS1,2	Longman	£35.25	£30
Real McCoy 4	Fourth	£25.85	£22
Recordz	Colton	£109.28	£93
Report Writer, KS1-4	Creative	£56.40	£48
Resultz	Colton	£88.13	£75
Revelation ImagePro 24 bit, limited offer, KS2-4	Longman	£45.83	£39
Revolver	Psycore	£14.10	**£12**
Rhapsody 2	Clares	£56.40	£48
Rhapsody 3	Clares	£86.95	£74
Rhythm-Bed	Clares	£44.65	£38
Rick Dangerous	Hitmen	£12.93	£11
Ridiculous Rhymes, age 7+	Sherston	£45.83	£39
RISC OS 3 First Steps	Dabs	£7.00	V0£7
RISC OS 3 Programmer's Reference Manual vol 1-4	Acorn	£105.00	V0£105
RISC OS 3.1 Documentation	Acorn	£32.90	£28
RISC OS 3.6 Programmer's Reference Manual vol 5a	Acorn	£35.00	V0£35
Risc PC Technical Reference Manual	Acorn	£55.00	V0£55
Roll VT	Paragon	£24.68	£21
Rosie and Jim: Duck loses his Quack, age 3-6	Sherston	£11.75	**£10**

Dabs Guides only £7

ArtWorks Made Easy
Budget DTP
C Guide
Graphics on the ARM Machines
Impression
Risc OS 3 First Steps

or FREE with one of these

ArtWorks • Big Picture
C/C++ • Easy C (++)
Impression Style
Impression Publisher (Plus)
Pendown • Photodesk
ProArtisan 2 or 24
Textease
Risc OS 3.1 upgrades

Rosie and Jim: Jim gets the Sneezes, age 3-6	Sherston	£11.75	£10
Round the World Yacht Race, age 9+	Storm	£28.20	£24
RTF and WordPerfect Loaders and Savers	CC	£32.90	£28
Sally and Wally	Oregan	£23.50	£20
Saloon Cars Deluxe	Fourth	£25.85	£22
Saloon Cars Deluxe Extra Courses	Fourth	£17.63	£15
S-Base 2 Developer	Longman	£108.10	£92
S-Base 2 Personal	Longman	£55.23	£47
Schema 2	Clares	£111.63	£95
Score Draw	Clares	£51.70	£44
ScreenTurtle, KS1-3	Topolog	£39.95	£34
Search and Rescue, age 9+	Storm	£28.20	£24
Sea Rescue, age 7-9	Sherston	£29.38	£25
Seashore Guide	Micro S	£17.63	£15
SecureIT-Plus	Cambs Soft	£34.08	£29
Seelinks - Ourselves, KS1,2	ESM	£31.73	£27
Serenade	Clares	£88.13	£75
Shakespeare Show	Topolog	£45.83	£39
ShapeFX	Data Store	£10.58	£9
Sibelius 6, KS3,4	Sibelius	£180.95	£154
Sibelius 7	Sibelius	£974.08	£829
Sim City limited offer	Krisalis	£23.50	**£20**
Sim City 2000 for A5000, limited offer	Krisalis	£29.38	£25
Sim City 2000 for Risc PC limited offer	Krisalis	£29.38	**£25**
Simon the Sorcerer FD	GamesW	£32.90	**£28**
Simple Circuits, KS2,3	Camboard	£28.20	£24
Simple Control, KS2,3	Camboard	£21.15	£18
Sleuth 2	Beebug	£109.28	£93
smArt, age 7+	4Mation	£38.78	£33
smArt Faces: English	4Mation	£17.63	£15
smArt Fantasy	4Mation	£17.63	£15
smArt Fashion	4Mation	£17.63	£15
smArtFiler, age 7+	4Mation	£28.20	£24
smArt Homes: English	4Mation	£17.63	£15
Smudge the Scientist, age 4+	Storm	£44.65	£38
Smudge the Spaniel, age 4+	Storm	£22.33	£19
Somerset Talking Computer Project Learning Materials	Longman	£30.00	V0£30
Space City, age 7-9	Sherston	£29.38	£25
SparkFS	Pilling	£23.50	£20
Speaking Starspell	Fisher	£48.18	£41
Special	ICS	£11.75	£10
Speedball II	Krisalis	£21.15	£18
Spelling week-by-week, KS2	Chalksoft	£28.20	£24
Spex+ Full version	Aspex	£44.65	£38
Spex+ Home version	Aspex	£38.78	£33
Split an Image, age 7-16	Sherston	£19.98	£17
Splosh+	Kudlian	£44.65	£38
Spobbleoid Fantasy	Fourth	£32.90	**£28**
Star Fighter 3000	FedNet	£27.03	£23
Starspell	Fisher	£30.55	£26
StartWrite	Icon	£64.63	£55
Stereoworld	Fourth	£32.90	£28
Stig of the Dump, KS2,3 (not Risc PC)	Sherston	£28.20	£24
Studio24 + Studio24Pro	Pineapple	£145.70	£124
Stunt Racer 2000 (not Risc PC)	Fourth	£28.20	£24
Stunt Racer 2000 for Risc PC	Fourth	£28.20	£24
Stunt Racer 2000 Extra Tracks	Fourth	£18.80	£16
Table Aliens age 8-11	Sherston	£27.03	**£23**
TableMate 3	Dalriada	£34.08	£29
TABS	Aspex	£111.63	£95
Talking Animated Alphabet, age 3-6	Sherston	£32.90	£28
Talking Clocks, KS1,2	Topolog	£37.60	£32
Talking PenDown, KS1-3	Longman	£78.73	£67
Talking Rhymes Pack 1, KS1	Topolog	£28.20	£24
Talking Textease	Softease	£75.20	£64
TechWriter	Icon	£169.20	£144
TechWriter Professional	Icon	£224.43	£191
Teletext-Turbo	XOB	267.90	£228
Termite Basic	Doggy	£57.58	£49
Termite Internet	Doggy	£92.83	**£79**
Textease Version 2	Softease	£56.40	**£48**
Time Detectives ... The Victorians, KS2	Sherston	£49.35	£42
Time Machine	Fourth	£22.33	£19
Time Traveller - Britain Since 1930, KS2	ESM	£31.73	£27
Time Traveller - The Victorians, KS2	ESM	£31.73	£27
Time Traveller - Tudors & Stuarts, KS2	ESM	£31.73	£27
TinyDraw/TinyLogo, KS1,2	Topolog	£29.38	£25
Topographer	Clares	£69.33	£59
Touch Type	Iota	£44.65	£38
Trace	Pilling	£10.58	£9
Trecka	TBA	£19.98	£17
TurboDriver Canon	CC	£45.83	£39
TurboDriver Epson Stylus 800	CC	£45.83	£39
TurboDriver HP	CC	£45.83	£39
Twain Canon IX incl Scan-Light Professional	Pilling	£18.80	£16
Twain Epson GT8000, 6500	Pilling	£18.80	£16
Twain HP Scanjet II, IIc, IIcx	Pilling	£18.80	£16
TWO (Task and Window Organiser)	ICS	£11.75	**£10**
TypeStudio	Beebug	£32.90	£28
Vector, age 9+	4Mation	£68.15	£58
VersaTile	Longman	£47.00	£40
Virtual Golf	Fourth	£25.85	£22
Virtualise	Clares	£23.50	£20
ViVID20	iSV	£9.40	£8
Vox Box	Clares	£47.00	£40
Voyage of Discovery, age 9-13	Sherston	£36.43	£31
Wardrobe, KS1	Topolog	£19.98	£17
Watch - Magic Grandad 90 Years Ago	Longman	£30.55	£26
What Do You Know?, age 4+	Cambs Soft	£22.33	£19
WinLogo, KS1-4	Longman	£84.60	£72
World Geography Maps	Micro S	£28.20	£24
World Wildlife Graphics	Micro S	£17.63	£15
WorraCad	Oak	£76.38	£65
Worst Witch, age 7-10 (not Risc PC)	Sherston	£28.20	£24
Zig Zag - Vikings	Longman	£38.78	£33
Zoo, KS1	Topolog	£19.98	£17

IDE hard disc kits

The best IDE filing system

• Password protection • Disc partitioning •
• Not limited to 512 Mb •
Please specify OS 2 or OS 3 for all kits and interfaces
All ICS CD products require Risc OS 3.1 or later

IDE Internal Hard Disc Kit for A3000 Series:
– ADD £14 TO INCLUDE OUR CD FILING SYSTEM –
– OR £5 IF YOU REQUIRE A USER PORT –

80 Mb	ICS	£175.08	£149
240 Mb	ICS	£198.58	**£169**

Smaller sizes are now rare so please check availability.
IDE Internal Hard Disc Kit for Archimedes range:

540 Mb	ICS	233.83	**£199**
1000 Mb	ICS	276.13	£235

A3000 CD bargains

Do you already have an ICS IDE interface? Would you like a

4-speed CD for £185?

(Prices may be even lower by the time you read this)

4-speed Upgrade for A3000 Series with ICS IDE	ICS	£217.38	£185
6-speed Upgrade for A3000 Series with ICS IDE	ICS	£296.10	£252

–You need Risc OS 3.1 and a free external IDE connector–
Check the version number of your IDEFS module:
press F12 and type *Help IDEFS
If it is 3.14 or more you just pay the above prices.
If it 2.5 or more but less than 3.14
your interface needs a modification costing £19.
If it is less than 2.5 please call for advice.

IDE CD only kits

– ALL ICS CD PRODUCTS REQUIRE RISC OS 3.1 –

4-speed for A3000 Series	ICS	£264.38	£225
4-speed for Archimedes	ICS	£245.58	£209
4-speed for Risc PC	ICS	£146.88	£125
4-speed + HDFS for A3000 Series	ICS	£277.30	£236
4-speed + HDFS for Risc PC	ICS	£159.80	£136
6-speed for A3000 Series	ICS	£341.93	£291
6-speed for Archimedes	ICS	£327.83	£279
6-speed for Risc PC	ICS	£227.95	£194
6-speed + HDFS for A3000 Series	ICS	£354.85	£302
6-speed + HDFS for Risc PC	ICS	£240.88	£205
IDE CD Interface for A3000 Series	ICS	£83.43	£71
IDE CD Interface for Archimedes	ICS	£68.15	£58
IDE CD Interface for Risc PC	ICS	£64.63	£55
IDE CD + HD Interface for Risc PC	ICS	£77.55	£66

IDE HD + CD kits

– FOR A3000 SERIES –
– ALL ICS CD PRODUCTS REQUIRE RISC OS 3.1 –

80 Mb + 4-speed	ICS	£381.88	£325
80 Mb + 6-speed	ICS	£468.83	£399
240 Mb + 4-speed	ICS	£410.08	**£349**
240 Mb + 6-speed	ICS	£433.58	£369

Hard discs & CDs

IDE CD Drive 4-speed	ICS	£92.83	£79
IDE CD Drive 6-speed	ICS	£188.00	£160
IDE 2½" Hard Disc, 240 Mb	ICS	£128.08	£109
IDE 3½" Hard Disc, 540 Mb	ICS	175.08	£149
IDE 3½" Hard Disc, **1000 Mb**	ICS	217.38	**£185**
IDE HD Interface for A3000 Series	ICS	£88.13	£75
IDE HD Interface for Archimedes	ICS	£70.50	£60
IDE HD Interface for Risc PC	ICS	£70.50	£60
IDE HD Interface + User Port for A3000 Series	ICS	£92.83	£79
Hard Disc Cradle Kit for Archimedes	ICS	£17.63	£15
Hard Disc Fitting Kit for A3000	ICS	£8.23	£7
Hard Disc Fitting Kit for A3020	ICS	£8.23	£7
Hard Disc Fitting Kit for Risc PC 5¼" bay	ICS	£23.50	£20
Hard Disc Form Factor Converter 2½" to 3½"	ICS	£8.23	£7
Second Hard Disc Fitting Kit for A5000	ICS	£17.63	£15
Second Hard Disc Y Power Lead	ICS	£8.23	£7

Removable discs

IDE Removable Hard Disc Kit for A5000, 270 Mb	ICS	£421.83	£359
IDE Removable Hard Disc Kit for Risc PC, 270 Mb	ICS	£421.83	£359
IDE 3½" Removable Hard Disc Cartridge, 105 Mb	SyQuest	£61.10	£52
IDE 3½" Removable Hard Disc Cartridge, 270 Mb	SyQuest	£64.63	£55
Removable Hard Disc Fitting Kit for A5000	ICS	£29.38	£25
Removable Hard Disc Fitting Kit for Risc PC 5¼" bay	ICS	£23.50	£20

POSTAGE IS FREE
FOR PREPAID SALES IN THE UK



Acorn Risc PC

Risc PC700 5M HD425 14" Monitor	Acorn	£1596.83	£1359
Risc PC700 5M HD425CD 14" Monitor		£1726.08	£1469
Risc PC700 10M HD850 14" Monitor	Acorn	£1984.58	£1689
Risc PC700 10M HD850 17" Monitor	Acorn	£2367.63	£2015
Risc PC700 10M HD850CD 14" Monitor		£2113.83	£1799
Risc PC700 10M HD850CD 17" Monitor		£2496.88	£2125
Case Mid Upgrade for Risc PC 600 2M and 5M	Acorn	£123.38	£105
Cx 5x86-100 Card for Risc PC	Aleph	464.13	£395
Ergo Keyboard for Risc PC	Castle	£44.65	£38
Power-tec SCSI II Card for Risc PC	Alsystems	£186.83	**£159**
Risc PC 1 - 2 Mb VRAM Upgrade	Atomwide	£111.63	£95
Risc PC 2 Mb VRAM	Acorn	£229.13	£195
Risc PC Sound Card	Acorn	£68.15	£58
Risc PC x86 Card 5x86	Acorn	467.65	£398
Risc PC x86 Card DX2-66	Acorn	£291.40	£248
Risc PC x86 Card DX4-100	Acorn	£350.15	£298
SCSI II Interface for Risc PC	Cumana	£193.88	£165
SIMM 4 Mb 32 bit		41.13	£35
SIMM 8 Mb 32 bit		57.58	£49
SIMM 16 Mb 32 bit		104.58	£89
SIMM 32 Mb 32 bit		199.75	£170
StrongARM SA-100	Acorn	291.40	£248

Acorn portables

A-Link for Pocket Book	Acorn	£51.70	£44
Flash Disc 512K for Pocket Book	Acorn	£92.83	£79
Flash Disc 1 Mb for Pocket Book	Acorn	£119.85	£102
Mains Adaptor for Pocket Book	Acorn	£18.80	£16
Parallel Link for Pocket Book	Acorn	£32.90	£28
Pocket Book II 256K	Acorn	£238.53	£203
Pocket Book II 1MB	Acorn	£333.70	£284

Other hardware

A305/310/440 RISC OS 3 Carrier Board	IFEL	£22.33	£19
A7000 4M HD425	Acorn	£1021.08	£869
A7000 4M HD425CD	Acorn	£1138.58	£969
Auto-Scan 1438 Monitor (14") **AKF 50** alternative	Microvitec	£299.63	**£255**
Auto-Scan 1450 Monitor (14") **AKF 60** alternative	Microvitec	£229.13	**£195**
Backplane, 4-slot 4-layer with fan	IFEL	£64.63	£55
ColorMobile Direct Scanner for Windows	Primax	£175.08	£149
ColorMobile Office Scanner for Windows	Primax	£233.83	£199
DeskTV Entry level	Yellowstone	£192.70	**£164**
DeskTV Standard (with Tuner)	Yellowstone	£232.65	£198
DMI 30	Audio	£106.93	£91
DMI 50 - S	Audio	£192.70	£164
Ergo Keyboard	Castle	£115.15	£98
Ethernet Interface, A400 10base2+T Access+	Atomwide	£116.33	£99
Fan Kit for A300 / A400 Series	ICS	£17.63	£15
GamesPad Dual	GamesW	£35.25	£30
GamesPad Pro Dual	GamesW	£39.95	£34
GT-5000 A4 Colour Flatbed Scanner (parallel port)	Epson	£410.08	£349
iTV	Irlam	£197.40	**£168**
Lambda16	Irlam	£115.15	£98
Midi Max	CC	£79.90	£68
Movie Magic	CC	£287.88	£245
Mozart Digital Audio	Yellowstone	£69.33	£59
PD Cartridge, 650 Mb Rewritable	Panasonic	£44.65	£38
Power Switch	GamesW	£19.98	£17
PowerWAVE 50XG	Audio	£292.58	£249
Printer Port Sampler	VTI	£57.58	£49
RISC OS 3.1 3 Set Rom Pack	Acorn	£88.13	£75
RISC OS 3.1 10 Set Rom Pack	Acorn	£292.58	£249
RISC OS 3.1 Software Upgrade with documentation	Acorn	£78.73	£67
RISC OS 3.1 Software Upgrade without documentation	Acorn	£45.83	£39
ScanLight 256	CC	£150.40	£128
ScanLight 256 for A3000/3010/3020/A4000	CC	£162.15	£138
ScanLight Video 256 A310/400/5000/Risc PC	CC	£220.90	£188
ScanLight Video 256 A3000/A4000	CC	£220.90	£188
Sound Force 1 Multimedia PC Speaker System	QuickShot	£39.95	£34
Sportster Vi 14.4	US Robotics	£112.80	£96
Sportster Vi 28.8	USR	£179.78	**£153**
Tele-Card	XOB	177.43	£151
Tele-Card + Teletext-Turbo	XOB	420.65	£358
TV Tuner with Teletext	CC	£184.48	£157
User Port / MIDI Upgrade for A3000	Acorn	£59.93	£51
Vision 24 A3000/3010/3020/4000 internal	HCCS	102.23	£87
Vision 24 A5000/400/300/Risc PC	HCCS	102.23	£87
Vision 24 508 line A3000/3010/3020/4000 internal	HCCS	136.30	£116
Vision 24 508 line A5000/400/300/Risc PC	HCCS	136.30	£116
Whisper Fan Quietener (for A300/A400 Series only)	ICS	£17.63	£15
Wizzo5 for A5000	ICS	£45.83	£39

Memory

A305/310/440 1 - 4 Mb	IFEL	£138.65	£118
A3000 1 - 2 Mb, Upgradable	IFEL	£61.10	£52
A3000 1 - 4 Mb	IFEL	£111.63	£95
A3010 1 - 2 Mb	IFEL	£44.65	£38
A3010 4 Mb	IFEL	92.83	£79
A3020 / A4000 2 - 4 Mb	IFEL	£86.95	£74
A5000 2 - 4 Mb	IFEL	£76.38	£65

0151-625 1006

Printers

BJ-30 Bubble Jet Printer (Black)	Canon	£162.15	£138
BJ-30 Bubble Jet Printer (White)	Canon	£162.15	£138
BJC-70 Colour Bubble Jet Printer (Black)	Canon	£210.33	£179
BJC-70 Colour Bubble Jet Printer (White)	Canon	£210.33	£179
BJC-210 Colour Bubble Jet Printer	Canon	£175.08	**£149**
BJC-610 Colour Bubble Jet Printer	Canon	£421.83	£359
BJC-4100 Colour Bubble Jet Printer	Canon	£233.83	**£199**
BJC-4xxx Cartridge, Colour	Canon	£47.00	£40
BJC-4xxx Cartridge, Black	Canon	£30.55	£26
BJC-4xxx Ink Tank, Black	Canon	£10.58	£9
BJC-4xxx Ink Tank, Colour	Canon	£17.63	£15
Bubble Jet BJC-600 Ink Cartridge, Black High Capacity	Canon	£14.10	£12
Bubble Jet BJC-600 Ink Cartridge, Cyan	Canon	£11.75	£10
Bubble Jet BJC-600 Ink Cartridge, Magenta	Canon	£11.75	£10
Bubble Jet BJC-600 Ink Cartridge, Yellow	Canon	£11.75	£10
DeskJet 340	HP	£233.83	£199
DeskJet 500 Series / Deskwriter Ink Cartridge, Black high capacity	HP	£24.68	£21
DeskJet 500 Series Tri-chamber Colour Ink Cartridge	HP	£27.03	£23
DeskJet 600	HP	£205.63	£175
DeskJet 660C	HP	£280.63	£239
DeskJet 600 Series Ink Cartridge, Black	HP	24.68	£21
DeskJet 600 Series Ink Cartridge, Colour	HP	25.85	£22
DeskJet 870Cxi	HP	£440.63	£375
EP-L Toner Cartridge for LBP-4	Canon	£69.33	£59
EP-S II Toner Cartridge for LBP-8	Canon	£81.08	£69
LaserJet 5L	HP	421.83	£359
Stylus 500	Epson	£304.33	**£259**
Stylus Colour IIs	Epson	£229.13	£195

20 months to pay
0% FREE FINANCE!
Call now for details

HOW TO ORDER

Carriage is free within mainland UK if you pay on ordering.z

Cheques should be made payable to Ian Copestake Limited.

You may also pay by ***credit card***, ***debit card*** or ***Switch***. We normally make ***no charge*** for this, and take no payment until goods are despatched. We need your address as known to the card issuer, the card number and expiry date, and the valid from date and issue number if any.

If you leave an order on our ***answering machine*** please include your telephone number, your card details as above, and your calculation of the total payment due.

Official orders are welcome from UK educational and government institutions (invoices are due for payment within 14 days and are subject to carriage and late payment charges).

Prices including VAT are shown in italics, followed by the price excluding VAT: eg "*£11.75* £10". Zero-rated items are marked V0. Please pay the amount including VAT unless you are a VAT-registered EC customer outside the UK, in which case please quote your international VAT number. Ours is GB 595 7258 84.

Overseas carriage: If you are paying by credit card we will add airmail and insurance at cost. Otherwise please add £6 (Europe) or at least £12 (elsewhere) for each software item and send a pounds sterling bank draft payable at a London clearing bank, or Eurocheques for not more than £100 each.

All products, prices and specifications are offered in good faith and are subject to availability and change without notice. Special offers apply only while stocks last. Goods are guaranteed but we do not supply them on approval. Returns (in original packaging) and cancellations can only be accepted by prior agreement and there may be a charge to cover the costs involved.

0151-625 1006

Authorised Acorn Dealer and Developer
Cheques payable to Ian Copestake Limited please

Dept U608, 1 Kington road
West Kirby, WIRRAL
Merseyside, England, L48 5ET

Tel: 0151-625 1006 Fax: 0151-625 1007
sales@ianco.co.uk

E&OE W608 96AU09

News

Picture this

A CHEAPER and potentially far more popular alternative to Kodak's Photo CD digital image storage service is being prepared for launch by Kodak. A much more affordable alternative, called Picture Disc, will soon join Photo CD in Kodak's digital armoury.

Kodak's Photo CD dream is far from dead, it has a strong following in niche markets and among printers and publishers, but it has been a thorough flop with all-important mass-market consumers. It was a great idea – being able to transfer your favourite photos to a CD-ROM and being able to display them on a TV, print them out or use them on your home computer.

Picture quality was also excellent. However, consumers weren't keen on the relative expense of Photo CD and the time you had to wait while your Photo CD-ROM lingered at Kodak each time you wanted to add some new pictures to the CD. Another problem has been that sales of the special Photo CD players you need to use the TV display option, never took off.

Kodak's strategy with Photo Disc is to forget about ultimate picture quality and adopt a universal and affordable storage medium – the floppy disc. With the Kodak Picture Disc system you will be able to take a floppy disc to a participating photo finisher and have your negatives or slides scanned and stored in a standard picture format, probably JPEG, on that very floppy disc.

The original Photo CD system stores a selection of different resolution images of the same picture, the highest resolution of which equates to several megabytes of data. With Picture Disc the image file size will be much smaller, measurable in tens of kilobytes rather than megabytes, so several Picture Disc images can be stored on one conventional 1.44Mb PC-format floppy disc. Although Picture Disc images will be compressed considerably compared to Photo CD, it's unlikely there will be any noticeable degradation in image quality when the images are used for displaying on a computer screen.

The service should be considerably cheaper than Photo CD and as the equipment required for scanning onto a floppy disc is so much simpler and cheaper, there will be more incentive for a photo finisher to install the system. Kodak sees the Internet driving demand for Picture Disc, as images stored on a Picture Disc can be quickly and conveniently pasted into personal web page or attached to an e-mail message.

The rapid improvement in print quality of low cost colour printers also means that more acceptable DIY print outs can be obtained using a typical home computer set up. Photo CD will continue and may even receive a boost by its Picture Disc cousin in the long run, as users decide they eventually need the full range of options offered by Photo CD.

Psion, StrongARM, GSM and the Amstrad factor

PSION, which has been highly successful in the personal organiser/palmtop computer market for both personal and industrial applications, came close to acquiring the Amstrad group, which is owned and was founded by the celebrated UK entrepreneur Alan Sugar.

Acorn's Pocket Book range is produced for Acorn by Psion. At the same time, Psion has started collaboration with Digital Equipment which will see its palmtop operating system ported to the StrongARM platform. The dream of an ARM-based Psion organiser, even an ARM-based Acorn Pocket Book, suddenly doesn't look so fanciful.

The Amstrad Group has interests in low cost hi-fi, VCRs and televisions as well as PCs and pen-centric palmtop organisers. However, the jewel in the £200 million Amstrad crown as far as Psion was concerned was Amstrad subsidiary Dancall, the mobile phone business acquired by Amstrad two years ago. Psion's strategy is to add mobile communications features to its future product line, notably GSM digital mobile phone functionality. Dancall would have furnished Psion with the necessary know-how to integrate cellular mobile technology into its own products.

Despite long drawn out negotiations, an agreement was not forthcoming from the two parties. Sugar, who once saw Amstrad become Europe's biggest PC manufacturer by volume, has for some time been looking for a buyer of the business he started over 20 years ago. While some industry watchers felt Psion and Amstrad would have made an ideal combination, Psion was mainly interested in the Dancall subsidiary and negotiations faltered over agreeing a price plus a plan for the disposal of other parts of the Amstrad Group. Despite the setback, Psion promises to introduce GSM-enabled products during 1997.

Psion recently licensed its multi-tasking palmtop operating system development system to Digital so that it could be ported to the StrongARM. Although StrongARM runs at 200MHz, ten times the speed of the original ARM processor used in current Apple Newtons, for example, and delivers Pentium-level performance, its 2 volt design only generates about half a watt of power consumption enabling it to be ideally suited for battery-powered applications.

At $50 a throw in large quantities, StrongARM processors are also remarkably inexpensive. It's expected that Psion is aiming to replace its highly successful Series 3 and WorkAbout products with an all-new StrongARM-based palmtop with optional GSM mobile communication facilities. Apple is also likely to produce a StrongARM-based Newton in 1997.

Liverpool ever-enthusiastic

WE have been contacted by the Liverpool Enthusiasts Group (LEG), which is planning its programme for the academic year 96/97. If you would like to join LEG, or if you are a company which would like to give a talk or a presentation, you're invited to e-mail the acting Chairman Tom Hebbron at LEG@hebbron.demon.co.uk. Alternatively, contact him at LEG, c/o Tom Hebbron, 34 Beesford Rd, Oxton, Birkenhead, Merseyside, L43 1XJ.

A web site with information about the group, and a summary of the first meeting is at http://www.hebbron.demon.co.uk/LEG/ (case sensitive).

Panasonic aids memory loss

PANASONIC has introduced new SIMM (single inline memory module) memory parts, branded TAB, which are designed to combat computer crime.

All TAB memory modules are uniquely marked with both a serial number and a product code which should help owners trace their memory modules should they be unlucky enough to be stolen. In the past there has been considerable criticism from police investigating memory thefts over the fact that memory modules are not uniquely identifiable. In other words, memory chips are a hi-tech thief's dream come true. Hopefully Panasonic TAB modules will be less worthwhile stealing. Panasonic also claims its modules are better protected against physical and electric static damage. This confidence is backed up by a lifetime warranty and next day replacement scheme.

TAB products are available from selected dealers complete with a free anti-static wrist strap. European distribution is via VTEC Industry Europe, tel: +44 1264 336901, fax: +44 1264 355768, e-mail vtec@tcp.co.uk

Avery Dennison introduces CD labels

AT FIRST you might think why would anyone want to label a CD? In fact the market for recording onto blank CD-ROM media using CDR (recorder) drives is growing fast. Ordinary labels are a risky solution for several reason, says Avery.

Firstly they aren't usually the right shape or size and the adhesives used can damage the polycarbonate structure of the CD, threatening the integrity of stored data. Avery says its new CD Laser Labels are the right circular shape and size, have CD-friendly adhesive bases and can be centred on the CD with ease, avoid any wobbling of the label when it is in the drive. Avery say they expect their main customers to be graphic designers and publishers, who are the main users of CDR equipment to date.



StrongARM compatibility testing going well

ACORN has had a steady stream of visitors from Acorn developers eager to try out their wares on prototype StrongARM-equipped Risc PCs. Despite a rash of unexpected chip failures, later revealed to be caused by static damage, enough time was found to test a good sample of applications in readiness for the big StrongARM/RISC OS 3.7 launch in September.

Below is a brief summary of a selection of the results from David Walker, who is co-ordinating developer support at Acorn. As David says, developers have been walking out of Acorn House with broad grins from 'ear to ear' as most applications run five times faster than an ARM710 machine — that's nearly seven times faster than ARM610 and a factor of fourteen greater than the A5000.

Apricote Studios: *Prophet 2* works on StrongARM. In tests, it was able to load and parse a database containing records for over 3600 customers in just under 3 seconds. Both *Shares 5* and *Personal Accounts 3* also work.

Aspex: *ArchiTech* works.

Beebug: In *Sleuth 2* the file "kidsbook" as supplied takes 72 seconds to convert on a Risc PC 700. It takes 20 seconds on StrongARM – at a conversion rate of 1,944 words per minute. With *Ovation Pro*, picture runaround Dolphin image takes 9 seconds on a Risc PC 700, reduced to less than 2 seconds on a StrongARM. *Sleuth, Masterfile 3, Hard Disc Companion, TypeStudio, Desktop Thesaurus, PlayBack, ArcScan, Chartwell, DeskEdit* and *MenuBar* have also been tested with successful results.

Clares: *ProArtisan 2* works successfully on StrongARM. *Topographer* works successfully on StrongARM, exhibiting a very significant speed-up; it runs circa 10 times faster than on ARM710. *Illusionist, Plot, Armadeus, AlphaBase, Celebration, NightSky, CardShop, Knowledge Organiser 2, Titler, Sequencer, RhythmBed* and *ScoreDraw* all work successfully on StrongARM. Both *Render Bender 2* and *Schema 2* work. *Virtualise 1.06, Serenade 1.10* and *Composition 1.02* do not work on StrongARM; however, changes have been made which will enable a new release, provisionally 1.03, to work. Upgrade details will be made available by Clares.

Gnome: The !X X-server runs approximately twice as fast as on a Risc PC 700.

Intelligent Interfaces: Using the current version of the II Dual module (V3.72), II's Dual High Speed Serial Interface works with a StrongARM. Using the current version of the IEEE488 module (V1.04) the IEEE488 Interface works. Using a new version of the 16BitPIO module (V1.03) the 16 Bit Parallel I/O Interface works. Using the current version of the STEbus module (V1.10) the STEbus Interface works. All the components of Desktop Fortran 77 (The compiler, the linker and the !Fortran77 application) work with a StrongARM.

David Pilling: *Chess II, Trace, d2font, Snap* and *Spark* have been tested and are known to work (*Chess II* and *Trace* both exhibit an impressive increase in speed); *SparkFS* required a small patch to be implemented, and the patch kit is now available via http://www.netlink.co.uk/users/pilling/

Spacetech: *Photodesk* runs successfully on StrongARM, up to a factor of 10 times faster.

Acorn remains confident that StrongARM is on schedule to start shipping to customers by the end of September. RISC OS 3.7 required for StrongARM has been frozen and despatched for ROMing in Korea by the beginning of August, while measures to combat static sensitivity of the delicate StrongARM chips was being finalised.

OVATION *Pro*

(THE PROFESSIONAL DESKTOP PUBLISHER)

Ovation Pro combines fast responsive word processing with state-of-the-art page layout features to deliver the ultimate desktop publishing system. Packed with a staggering range of professional features—many available on the Acorn platform for the first time—Ovation Pro opens up a whole new world of document design. At last you can flow text inside and outside irregular frames or rotate them to any angle—in both cases the text remaining fully editable. Even with such vast range of features Ovation Pro is still easy to use, thanks to a superb user interface that makes the software easy to learn and instinctive to use.

(SUPERB FACILITIES INCLUDE:)

- Definable Button Bar
- Multi-step Undo and Redo
- Named colour system
- Definable width Pasteboard
- Frames with skew and rounded corners
- Straight and curved line drawing
- Easy-to-use active master pages
- Reads Ovation, RTF, DDF, Artworks
- Irregular frames with Bézier curves
- Drag & Drop for text and objects
- Definable colour charts
- Justification and letter spacing
- Vertical justification
- Autoflow around irregular graphics
- Context sensitive info palette
- Macro handling and script language
- Rotated text frames with editable text
- Drag and drop between documents
- Automatic drop caps
- Multi-column frames
- Frame borders and drop shadows
- Show invisibles
- !Chars and single-shift font change
- Customisable with saveable changes

(FREE UPDATE)

A free update will be sent to all registered users, offering more advanced features such as full-colour and spot colour separations, image processing, auto paragraph numbering and 'local OPI' for handling large graphics bigger than the memory size.

(THE EXTENDABLE DTP SYSTEM)

Ovation Pro has advanced expansion capabilities using extension modules called Applets. These allow new features to be added without the need to upgrade the main application. Simple extensions may also be written using the integrated script language. A range of extension applets and scripts are planned for the future.

(THE OVATION PRO PACKAGE)

Ovation Pro is supplied with a 300-page reference manual, separate tutorial, reference card, Bubble Help, Desktop Thesaurus, 50 outlines fonts (from EFF, Acorn and Beebug) and a sample selection of clipart from DEC_dATA.
Full colour brochure available on request.

(OVATION PRO *costs* £193.88)

Upgrade from Ovation (bought before 27/10/95) £92.83
Upgrade from Ovation or other DTP* £116.33
*includes impression, EasiWriter, PenDown+ and Advance
Other upgrades and site licences available – please phone for details
To upgrade you should return your original disc with payment (discs will be returned).
Prices include VAT but please add £3.50 carriage
Airmail will be charged at cost to overseas customers

BEEBUG

Beebug Ltd.
117 Hatfield Road, St. Albans, Herts. AL1 4JS
Tel: +44 (0) 1727 840303 Fax: +44 (0) 1727 860263 Email: sales@beebug.co.uk

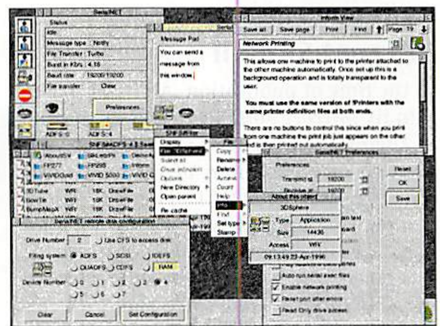
Serial networking from ISV Products

ISV PRODUCTS should have availability of their new low cost serial networking solution, *SerialNet*, priced £21.50 inc. VAT. ISV developed *SerialNet* because they needed such a solution themselves and weren't satisfied with the various alternatives available to them.

Once a connection has been established, *SerialNet* presents the user with a filer window for each of up to 6 remote discs, which can be virtually any type of RISC OS-supported drive, including floppy discs, hard discs, CD ROMs, etc. The user has selectable control over the remote drives just as if they were local drives, including copy, move, rename and delete. Multiple file transfers and background printing is also supported across *SerialNet*. There is also an option for sending files to remote applications, like word processor documents to a word processor for spell checking.

On latest-generation Risc PCs, which have fast, buffered, serial ports, ISV say *SerialNet* can transfer 25K of average data per second. It's not blisteringly fast, but easily 4-5 times the speed of a fast modem, for example.

Older machines which have slower serial port hardware restricted to 19.2Kbits/second can crank up 5K per second transfers – about as quick as a fast modem. The *SerialNet* price does not include a cable and ISV will be supplying these if required, though prices were not available at the time of publication. Asked if a faster parallel port version of *SerialNet* might be in the wings, we were told that while a parallel version was feasible, demand for such an alternative hadn't yet been established. Let ISV know if you might be interested, you can contact them on tel: (01344) 55769.



IFEL update

IFEL, the memory and processor upgrade specialists, have a few items to add to the news pages this month. First of all, IFEL tell us that VLSI Technology have now stopped producing ARM3 processors. Until recently, VLSI was accepting medium size orders for the ARM3, but now the chip is officially discontinued.

Apparently, there is still a steady demand for ARM3 upgrades – normally schools upgrading batches of old A300 and A400 machines. Inevitably, supplies will evaporate and some customers could be left disappointed. IFEL itself says it has a few dozen 25MHz ARM3s in stock but isn't over confident about being able to replace these once they have been sold. You have been warned.

Price reductions have been announced on memory parts at IFEL. A3010 owners wanting to upgrade to 4Mb can now obtain a suitable upgrade from IFEL for £79 + VAT, a reduction of £20. As a matter of interest, IFEL these days produce A3010 4Mb RAM upgrades to the Acorn guideline specification, using a pair of 1Mx16 chips, which has been fairly unusual because of the expense of these chips. 1Mx16 RAMs used to cost over £200 each at one point! If you have already upgraded to 2Mb and will therefore have a spare 1Mb chip after the 4Mb upgrade, IFEL offers a £20 rebate on the redundant part, though the offer is only open to those who order the relevant upgrade.

IFEL is now selling a future-proof way of upgrading your A3000 or A4000, via an adapter which takes a standard 4Mb Risc PC/IBM clone-style 72 pin SIMM. The £89 + VAT price includes a 4Mb SIMM and IFEL don't currently offer the adapter on its own. Meanwhile, IFEL have substantially reduced the price of their SIMM memory, in line with everyone else. 16Mb SIMMs are now priced £95 + VAT and £32Mb £199 + VAT.

An interesting note about IFEL SIMMs is that they are upgradable. Each 16Mb SIMM has empty surface-mount spaces for additional chips to upgrade the SIMM to 32Mb. The SIMMs have to be returned for upgrading and, in fact, it's more than likely that IFEL will exchange them immediately for stock 32Mb SIMMs.

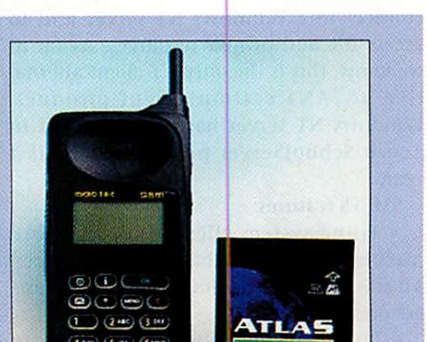
Finally, IFEL has moved from Saltash in Cornwall across the Taymar river to Plymouth, Devon. The new address is 21 Glenfield Road, Glenholt, PL6 7LL, tel: (01752) 777106, fax: (01752) 777830.

ARM-powered modem

COMMUNICATE, which claims to be Europe's leading developer and manufacturer of analogue and digital PC data cards, has announced an ARM-powered version of its miniature Atlas PCMCIA (PC Card) modem.

The Atlas card can deliver 28.8K bits/sec data rates using V.34 modem standards over conventional phone lines and 9.6K bits/sec over a Motorola GSM digital cellular phone connection. A communications processor engine called Ruby II is used by the modem and it's this which incorporates the ARM processor. This is used for data compression and error correction, enabling some data streams over GSM cellular links to achieve 36,000 bits/sec rates.

Communicate suggests that ARM power makes its modem technology up to three times faster than competing products in this respect. And of course, as it's an ARM, it consumes very little power – a crucial factor for PCMCIA cards designed for battery-powered portable computers. Communicate, tel: (01344) 291294, fax: (01344) 291284.



ANT and Aleph1 announcements

THERE are three announcements from ANT Ltd and Aleph1 this month: *Internet Suite II* release details, a new version of software support for PC co-processors and an update to the software enabling applications running on a PC co-processor to use Acorn networking.

Internet Suite II

At the time of publication, ANT was due to ship its *Internet Suite Release II* at the end of August. Pricing is set to be £99 plus VAT. Existing registered users of version 1 need only pay £10 incl VAT. There is also a competitive upgrade of £49 inc VAT for registered users of competing products. Customers who have bought and registered the *ANT Internet Suite* since May 19th this year will receive a free upgrade.

Upgrades include full release discs and new manuals. New features to check out include a revamped Fresco web browser, improved handling of off-line news and mail including support for multiple mail users/accounts and additional utilities including a Hotlist URLmanager and address manager.

New Fresco features include support for tables, animated GIFs, history lists, more Netscape 2.0 and HTML 3.2 extensions such as floating images. ANT are the official contractors developing the Web browser for the Oracle Network Computer, which is – in turn – being developed for Oracle by Acorn. ANT are quick to point out that developments to Fresco have benefited greatly from the NC project.

Part of the NC contract means that the NC version of Fresco will have to support all the main Netscape Navigator web browser features, so we can only hope more feature implementations will rub-off on the general RISC OS version of Fresco in future.

For more information, contact Ant Ltd at tel: (01223) 567808, e-mail: sales@ant.co.uk, Web, http://www.ant.co.uk

Aleph One intro's PCPro

Aleph One is now shipping *!PCPro*, the next generation of *!PC* software which works with PC second processor and expansion cards. New features include better support for Windows 95, shared memory drivers which accelerate data transfer from hard discs and CD-ROMs, VESA support for DOS, which enables more DOS-based PC games to work on the second processor card.

!PCPro has some significant performance improvements to offer. Benchmarking using the application-oriented WINSTONE 96 benchmark shows a 37 per cent speed increase on the same 5x86 hardware using Windows 3.1, and a 54 per cent increase using Windows 95.

Aleph One is making the upgrade free to customers who send in an installation disc from an earlier version of *!PC* with an Aleph One *!PC* Software label on it. A copy of the 88-page User Guide Issue 6 is also available for an additional fiver. Acorn second processor card users can upgrade for £49 (incl VAT and postage), which includes a copy of Acorn *PC Exchange* software for transferring files between RISC OS and DOS/Windows.

Network Links update

Network Links 12 is also now available from Aleph One with a comprehensive new user guide. *Network Links* lets the PC card use an Ethernet card within your Acorn computer to connect to networks. Software changes include better support for fast networks (NT servers, for example), and latest DCI4 drivers for all available network cards.

This includes 'virtual interfaces' which gives i-cubed cards the same functionality that ANT cards already have for using the same protocols on both the PC card and ARM side simultaneously – for example, TCP/IP and Access or Windows and OmniClient. The upgrade is free to existing customers though the new User Guide will cost you £5. The charge to new customers is £25.

Aleph One, tel: (01223) 811679, e-mail: sales@aleph1.co.uk, Web, http://www.aleph1.co.uk.

Log your Acorn into NT Server

DAVE KNELL of Dave Ltd has announced the imminent availability of SMBFS, a Windows NT client for the Acorn range. SMBFS allows an Acorn computer to connect to a Windows NT server and to access file and printer resources. As far as we know, this is the only NT client alternative to ANT's OmniClient product. Windows NT server has been featured in Acorn SchoolServer products since last year.

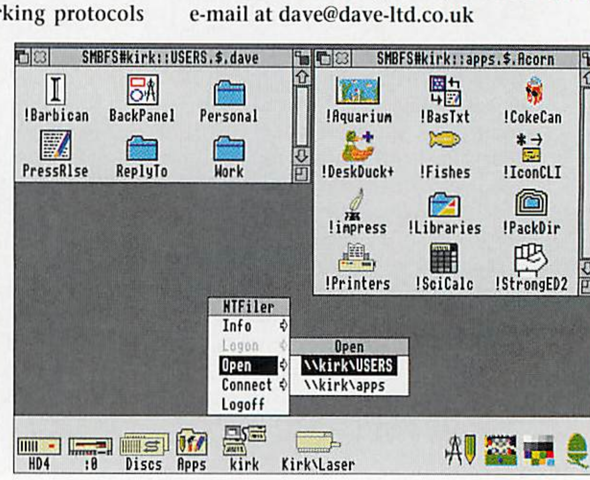
SMBFS features:

- Filing system client – allows Acorn machines to use NT shared disc resources. All file attributes, including filename case, are preserved.
- Printing system client – allows Acorn machines to print to printers accessible from the NT server.
- Password change software – users can change their passwords on the NT server from Acorn clients.
- Easy log on/log off – similar to Acorn's traditional AUN network client.
- Booting – the client can run a !Boot file on logon.
- Automatic connection to home directories – the client can be configured to attach to a user's home directory on the server or to connect to a user's share. There is also automatic connection to commonly used shared resources.

SMBFS runs SMB networking protocols (as spoken by Windows NT) over TCP/IP. It therefore requires !Internet to be run before connecting to a server. In order to ease configuration of clients, Dave Ltd supplies a utility which will set a client's IP address from its AUN station number, which is held in CMOS RAM.

!Internet is available from ftp.acorn.co.uk or directly from Dave Ltd and it's free. Prices are for a 25-user licence, £299 + VAT, a 50-user licence costs £399.00 + VAT and a 100-user licence is £499.00 + VAT. Dave Knell is working on a single-user/demo version which will be made available soon.

For more details, contact Dave Knell at Dave Ltd on tel: (01843) 846558 or by e-mail at dave@dave-ltd.co.uk



GIGANTIC SALE OF ACORN STOCK

From ONLY £1

Acorn

CASTLE TECHNOLOGY
01728 621222

ONLY £1 (£1.18 INC VAT)

PC Emulator 1.8 Manual	AKJ35	ADFS ROM Kit	ANB29
RISC OS 3 User Guide (German)	AKJ48	A4 Welcome Guide	ALJ20
RISC PC RO 3 User guide (German)	ACJ08	A4 Portable Guide	ALJ21
RO 3 Upgrade II German (4 ROM)	ALA38	A3020 Welcome Guide	AGJ02
A3010 German Welcome Guide	AGJ15	A3010 Welcome Guide	AGJ01
Reference Guide 2	ADJ23	A540/R260 Installation Guide	AKJ25
Reference Guide 1	ADJ22	Printer documentation	ABJ05
DNFS ROM	ANB21	JP360 Printer Disk	ABJ11
Viewsheet ROM	SBB07	Desktop Development User guide	SKD37
Assembler Rel.2 user guide	SKD36	Acorn Advanced User Guide	SKD77
View 3 ROM	SBB31	Acorn Advanced Project book	SKD78
Introduction to Comal	SBD19	Special Access software pack	SKP60
Viewspell	SBB28	Special Access Upgrade (Morley)	AGA30
View 3 manual	SBD58	TCP/IP Installation Guide	AED41
Viewsheet manual	SBD59	TCP/IP User Guide	AED40
Viewstore manual	SBD60	RISC PC 600 Welcome Guide	ACJ01
GRX Model B+	SBL26	EFF Font Pack & Printer Driver	BAP2
Microtext plus	SBL27	Midi upgrade	AKA54
Printer Server Eprom	AES22	Midi (AKA15) s/w upgrade	AKA56
Master Compact RS232 Kit	ADF15	Midi (AKA16) s/w upgrade	AKA55
Master Compact Pal TV Adaptor	ADF17	Midi (AKA12) Upgrade	AKA54
Master welcome guide	ADJ01	Pocket Book A-Link upgrade	AHA33

ONLY £5 (£5.88 INC VAT)

1772 DFS Upgrade Kit	ANB31	A5000 Service Manual	ALJ11
3.5" Floppy HD Disk (40 Discs)	SKB96	RISC PC - RISC OS User Guide	ACJ04
Pocket Book II OPL Manual	AHJ10	Programmers Ref manual 2	AKJ02
RISC OS 3 PRM Vol 5 + Index	ACJ05	Start Write	SKB62
Level 4 Fileserver upgrade	AES42	1st Word Plus (Release 2)	SKB70

ONLY £10 (£11.76 INC VAT)

Econet Module Kit (A3020/4000)	AEH52	RISC OS 3 Hardware upgrade kit	ALA32
Econet Starter Pack (SJ)	AEH51	JP150 Sheetfeeder	ABJ02
Winchester File Server	AES24	Midi upgrade module	AKA15
Podule Backplane	AKA01	PC Emulator 1.8 (No Dos)	AKA71
Action Pack	SKS01	RISC PC keyboard (German)	
Horizon Project CD ROM/Report	SKB95		

ONLY £20 (£23.50 INC VAT)

Econet Bridge (SJ)	AEH32	Acorn Advance off site M/user	SKS77
Power Supply for A5000	ALT13	300 1 CD ROM Drive for RISC PC	ACD01
Impression 2.5 (English)	Sold out	Master 128 Floppy drives	Sold Out

ONLY £30 (£35.25 INC VAT)

Floppy drive for all Acorns A3000 onwards

ONLY £50 (£58.75 INC VAT)

Boards for Master 128	ADT11
Econet Module Kit (Pk 10)	10 x AEH52
Domesday Disc Set	AVC14

LARGER VALUE ITEMS

		Ex VAT	Inc VAT
1000 x 1.6Mb High Density 3.5" floppy discs		110	129.25
Pocket Book System	AHB03	79	92.83
SX33 PC Cards inc Dos	ACA42	79	92.83
Acorn PC386 Card for A30x0 & A4000	AGA31	99	116.33
JP150 printer		109	128.08
Pocket book II - 512k	AHB06	149	175.08
A3010 2Mb c/w choice of software pack		£185	217.38
A4000 2Mb/210 HD	AGC50	£449	527.58
A5000 2Mb/80 HD	ALB32	£480	564..00
A5000 8Mb/120 HD	APT31	£549	645.08
A7000 2Mb/425 HD 2xCD	AMC22	£549	645.08
A4 4Mb/60 HD	AKB64	£799	938.83

Credit cards*, cheques, debit cards, building society cheques & official education & goverment orders accepted. Minimum order £10. Private & company cheques take up to 5 working days to clear. Delivery £9 (next day for stock items).

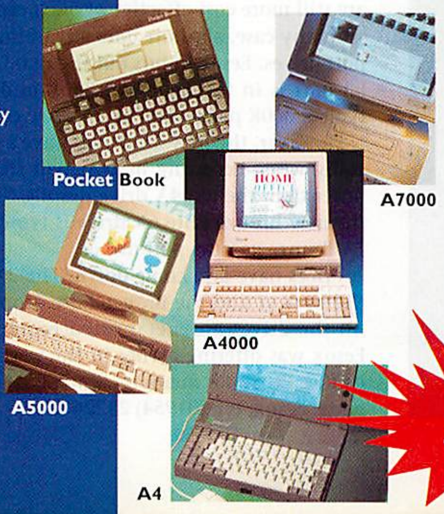
All items are brand new.

12 months warranty on all items over £20.

*Castle Technology reserve the right to levy a 2% handling charge on credit card transactions.

All trademarks acknowledged. E&OE.

01728 621222



Call us NOW!

Castle Technology Ore Trading Estate Woodbridge Road
Framlingham Suffolk IP13 9LL
Telephone: 01728 621222 Fax: 01728 621179
e-mail: sales@castle-technology.co.uk
Web: http://www.castle-technology.co.uk/

The Teds are back

Sherston Software and Jean Norgate, author of the best selling *Teddy Bears' Picnic* have collaborated once again to release a sequel: *The New Teddy Bears' Picnic*. Sherston says it's a brand new program for the Acorn platform. Lou Bonham, Sherston Software director, commented: '*The New Teddy Bears' Picnic* is full of really absorbing interactive tasks and I'm sure it will captivate children as much as it has the adults working on the project here at Sherston Software.'





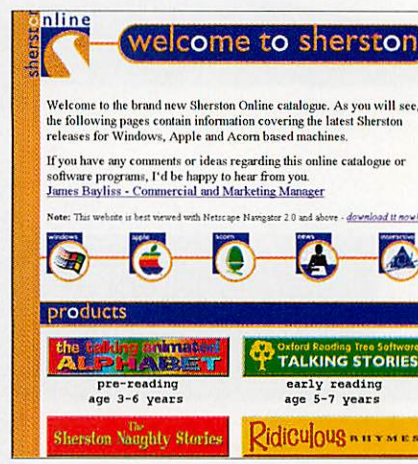
Despite the similar title, the Teddy Bears sequel has a set of six new carefully designed cross-curricular activities, including a very simple introduction to data handling. These are: *Fusspots* – practice with simple logic and fractions as they help the fussy bears sort themselves out at the picnic; *Musical Hats* – to help counting and simple subtraction; *Hidden Pictures* – for practising number work from simple counting to multiplication; *Picnic News* – which is a language activity for helping children design their own newspaper front page; *Bear Facts* – a simple pre-built database all about bears which can be added to by children with their own information. Finally, there is *Teddy Facts* – a simple information handling program for introducing the difficult concept of data handling to young children.

The New Teddy Bears' Picnic is scheduled for release in September. Prices will be £32.95 + VAT for a single user or £49.43 + VAT for a primary site licence.

Meanwhile, Sherston Software has opened its very own World Wide Web site at http://www.sherston.com. Sherston's Marketing Manager, James Bayliss commented: 'Everyone at Sherston is very excited about this development, there's no doubt about the pace at which Internet use is expanding. Our new web site will allow us to bring our product information to the attention of a much wider market in a very cost effective way.'

Sherston is also experimenting with the independent online service AOL (America Online), which has over 5 million subscribers and is the largest independent online service in the world, beating CompuServe into second place. Unfortunately, to date the AU newsdesk hasn't heard of an AOL navigator for the Acorn platform. Of course, if there actually is one, please let us know.

Sherston Software, tel: (01666) 840433, fax: (01666) 840048, e-mail: info@sherston.co.uk



More free beeps

Due to popular request, another collection of twelve System voices to replace the System 'beep' are now available for downloading from the Acorn Cybervillage FTP site. The ZIP archive contains full instructions on how to use them with any Acorn machine. You can still access the original beeps collection too. All you need to do is set your Web browser to:

ftp://quantum@quantum:ftp.cybervillage.co.uk/pub/fun/ or use an FTP client using a name and password of 'quantum' at ftp.cybervillage.co.uk/pub/

The files to go for are beeps.zip or beeps2.zip. The Acorn Cybervillage is a combined commercial and non-commercial Web and FTP site operated by Acorn developer Quantum Software. For more information, contact Stuart Halliday via e-mail at: stuart@quantumsoft.co.uk

Eesox offers CD-ROM more for less

EESOX has upgraded its Bronze Elite parallel port CD-ROM drives from a 4X mechanism to 6X. Although 8X speed IDE drives are all the rage now, parallel port drives are often based on SCSI parts and SCSI CD-ROM drives are still more cost-effective at 6X speeds, according to Eesox.

In any case, absolute data streaming speed is less important with parallel port drives. Eesox points out the maximum data rate possible across a parallel port is in the region of 360K and 440K per second, nowhere near the typical 600K per second of a 4X drive or 900K per second of a 6X drive.

However, the new 6X drives have a much faster data seek time, so – especially when accessing many small files – 6X drives will still be effectively faster than the old 4X drive despite the parallel port bottleneck. Eesox says the new Bronze Elite 6X drive is typically double the speed of the standard 2X Bronze parallel port drive.

Prices have also come down. The 2X Bronze is down from £169 + VAT to £129 + VAT and the Bronze Elite drops from £299 (4X drive) to £235 (£6X). All the drives are metal cased units rather then the walkman-style units Eesox was offering earlier in the year. Eesox has also reduced the prices of its Risc PC SIMM memory: 8Mb £55, 16Mb £89, 32 Mb £159 – all being 60ns parts. Eesox, tel: (01954) 212263.

Mail Order

Tel: 01924 254800 Fax: 01924 258036
E.Mail: Sales@Davyn.Demon.Co.UK

RiscPC+Upgrades

All RiscPC's & A7000's include 1yr on-site maintenance.

RiscPC 600(arm610)
4M/HD540 14"mon £1299.00e

RiscPC 700(arm710)
5M/HD540 14"mon £1549.00e
10M/HD 1GB 14" £1799.00e

Strong Arm upgrade
Available to order with new RiscPC at only £116.32

For 17'AKF90 monitor Add	£400.00
For CDrom Drive 4x Add	£99.00
For CDrom Drive 8x Add	£159.00

All Computers are built and tested before dispatch with printers and software purchased installed as required at no additional cost

486-SX-33 PC Upgrade	£233.00d
486-DX2-66 PC Upgrade	£292.00d
486-DX4-100 PC Upgrade	£351.00d
586-100 PC Upgrade	£468.00d

Deduct £117.50 off PC upgrades when purchased with RiscPC

PC Exchange	£29.00a
Windows 3.1 + DOS 6.22	£69.00c
Access+ Card	£116.00b
Arm710 upgrade	£146.00b
Strong Arm upgrade	£292.00b
Audio Mixer	£40.00a
Movie Magic	£279.00c
Second Slice	£116.00d
Sound Card	£69.00b
RiscPC 4Mb RAM	£25.00c
RiscPC 8Mb RAM	£49.00c
RiscPC 16Mb RAM	£99.00c
RiscPC 32Mb RAM	£219.00c
RiscPC 1Mb VRAM	£149.00c
RiscPC 2Mb VRAM	£249.00c

Archimedes Comp

A4 Portable (1.6 Floppy 4 Mb ram Arm 3 LCD Mon, 80Mb HD). £1350.00d

A7000 (1.6 Floppy 4 Mb expandable to 130Mb ram, Arm 7500 AKF60 M/S Mon. 540Mb HD. on site 12 months warranty)
4M/HD425 14"mon. £1028.00e
For 4xCDrom Drive Add £130.00

Pocket Book

Pocket Book 2(256k)	£239.00c
Pocket Book 2(1MB)	£319.00c
A-Link	£59.00b
M-Link	£69.00b
PC-Link +	£59.00b
Parallel Link	£28.00a
Power Supply	£14.00b
Flash SSD 1MB	£119.00c

Hardware Upgrades

Hawk V9 MkII	£194.00c
Lark Midi Sound-Sa.	£172.00c
Midi Max	£78.00c
Risc OS Upgrade Chips	£36.00a
SCSI 16bit	£95.00c
SCSI 2 32bit	£195.00c
TV Tuner	£99.00c
TV Tuner + Teletext	£159.00c

Data Storage

A30x0 CD Atapi interface	£84.00b
Quad External Atapi CD	£176.00c
A30x0 IDE interface	£88.00b
A30x0 IDE/CD interface	£104.00b

all above include HD fixing kit

IDE 2.5"

170mb	£99.00c
270mb	£125.00c
540mb	£289.00c

IDE 3.5"

1.0 gb	Conner	£210.00c
1.6 gb	Conner	£249.00c
1.7 gb	IBM	£229.00c

SCSI 2 3.5"

544 Meg Fujitsu	£188.00c
1 Gb10ms IBM	£289.00c

IDE CD Tray Internal

Panasonic	Quadpro	£99.00c
Pioneer	Quad	£99.00c
Goldstar	8 speed	£159.00c

SCSI CD Tray Quad Internal
Toshiba XM-3601B £259.00c

SCSI CD Caddy Quad Internal
Toshiba XM-3501B £299.00c

PD SYSTEMS

4X speed CD-ROM Drive
650 MB Optical Disc Drive
Internal or External
Including 1 Cartridge £539.00d
Extra 650MB Cartridge £45.00a

Memory Upgrades

A3000 1-2mb	£64.00b
A3000 1-4mb	£139.00c
A3010 1-2mb	£53.00b
A3010 2-4mb	£96.00b
A3020 / A4000 2-4mb	£99.00b
A5000 2-4mb	£99.00b

All Upgrades fitted free if ordered with Computer else £18.00

Monitors

Acorn AKF60	£380.00d
Acorn AKF90	£699.00d
Iiyama 17"MF8617E .26dot	£629.00d
Iiyama 17"MT9017E .25dot	£699.00d
Microv 14"1438 (AKF50)	£289.00d
Microv 14"1450 (AKF60)	£219.00d
Microv 15"1565 .28dot	£299.00d

Scanners

Epson GT5000 parallel	£399.00d
Epson GT5000 scsi	£469.00d
Epson GT8500 para/scsi	£529.00d
Epson GT9000 para/scsi	£659.00d
Scanlight 256 8bit	£164.00c
Scanlight 256 16bit	£151.00c
Scanlight 256 Video	£222.00c
Image Master/Twain Driver	£39.00a

Printers

Canon

BJ-30	(black)	£149.00d
BJ-70	(colour)	£209.00d
BJ-210	(black)	£169.00d
BJ-230	(black)	£311.00d
BJC-4100	(colour)	£259.00d
BJC-610	(colour)	£389.00d

Citizen

PRINTiva 600c	(colour)	£399.00d

Epson

Stylus Col 2	(colour)	£349.00d

Hewlett Packard

DeskJet 600	(Black)	£199.00d
DeskJet 660	(colour)	£349.00d
LaserJet 6L	(Black)	£499.00d

Calligraph

A4 1200 Laser	(black)	£1150.00d

Printer Inks/Refills



Inkjet Refills are an economical way of re-charging your existing cartridge All inks come complete with gloves, syringe and easy to use instructions.

Single 20ml Any Colour	£6.70a
Twin 2x20ml Black	£12.30a
Bulk 125ml Any Colour	£23.00b

'CartridgeMate' A new and



easy to use cartridge refill system for HP 51626A high cap. cartridges

A refill system with no mess

Comprises: CartridgeMate & 2 x 40ml Ink Tanks

Cartridge not included	£35.00b
Ink Tank 2 x 40ml	£21.00a

HP51625A Tri-Colour Cartridge refill kit 3 x 3 colour refills Comprises: C/M & Y Inks, Cap Retaining Clip
Cartridge Cap Remover £35.00a

We also carry a large stock of inkjet cartridges and ribbons

EP-L Toner for LBP-4	£69.00c
EP-S Toner for LBP-8	£79.00c

Printable Items

Colour'n Wear (2 white Baseball Caps + 3 transfer papers)	£10.50b
Colour'n Wear (2 white T Shirts + 4 transfer papers	£13.50b
Colour'n Wear (4 transfer papers only)	£7.50a
(30 transfer papers only)	£41.00b
Design & Print Mouse Mat	£5.00a
Design & Print Business Cards 10x8 A4 150g Perforated	£5.00a
Col InkJet matt photo white paper 25 sheets x 120gms	£5.50b
Monochrome InkJet brilliant white paper 100 sheets x 90gms	£3.00b

CD Software

ArtWorks	(CC)	£99.00c
ArtWorks Clipart I	(CC)	£20.00a
ArtWorks Clipart II	(CC)	£20.00a
Being a Scientist	(Anglia)	£44.00a
Bitfolio Ed7	(Lino)	£69.00c
Breakaway Maths	(YITM)	£70.00b
Britain from the Air		£44.00a
Britain Since 1930		£28.00a
Cars-Maths in Motion	(Cambs)	£105.00b
Dinosaurs	(M/S)	£45.00a
Castles	(Anglia)	£44.00a
Guardians of the Greenwood		£54.00a
Granny's Garden	(4Mat)	£35.00a
Hutchinson M/Media		£45.00a
Industrial Revolution	(Anglia)	£94.00a
Inventors&Inventions	(Anglia)	£164.00a
Kingfisher Childrens Micropedia		£93.00b
Langsdale	(CCS)	£104.00b
Medieval Realms 1066-1500		£164.00c
Musical Instruments	(M/S)	£45.00a
Mysteries of Nature	(Anglia)	TBA
Naughty Stories V1&2	(Sher)	£93.00b
PhotoBase 1920s,30s,40s,50s,60s		
Victorians,Landscapes Each	(LL)	£54.00a
RiscDisc 2	(Uniqueway)	£23.00a
Seashore Life (7-11)		£44.00a
Understanding Energy		£53.00a
Understanding the Body		£44.00a
World War 2		£28.00a

Application Software

Advance	(Acorn)	£116.00c
Advantage	(LL)	£54.00a
Ancestry II	(Minerva)	£87.00b
ANT internet	(ANT)	£116.00b
Apple FS (Sale)	(Oragan)	£30.00a
Arcfax	(David P)	£33.00a
Armadeus	(Clares)	£25.00a
ArtWorks	(CC)	£99.00c
C++	(Acorn)	£249.00c
Card Shop	(Clares)	£22.00a
Celebration	(Clares)	£32.00a
The Comp.Animator	(Iota)	£93.00b
Composition	(Clares)	£150.00c
Compression	(CC)	£31.00a
DataPower	(Iota)	£99.00c
Desktop Thesaurus	(R Dev)	£19.00a

Davyn Software
Draw to DXF Converter
NEW Only £23.00a

Easy Clip	(Fabis)	£31.00a
Easy Font 3	(Fabis)	£31.00a
Eidoscope (RiscPC only)	(CC)	£170.00b
Eureka 3	(LL)	£104.00c
Formulix	(CC)	£70.00a
Font FX	(Datastore)	£12.00a
Frame-It 1 or 2	(Davyn)each	£6.00a
Publisher irregular frames		
Graphics Loaders	(CC)	£44.00a
Illusionist	(Clares)	£45.00a
Image FS 2	(Alternative P)	£41.00a
Image Outliner	(Iota)	£54.00a
Impression Publisher	(CC)	£139.00c
Impression Style	(CC)	£79.00c
Intertalk	(Acorn)	£92.00c
Knowledge Organiser 2	(Clare)	£72.00a
Notate	(LL)	£62.00b
Pendown Etoiles	(LL)	£58.00c
Pendown Plus	(LL)	£83.00c
Personal Accounts	(Apricote)	£40.00b
PhotoDesk 2	(Space Tech)	£259.00c
Pinpoint	(Longman)	£104.00c
Pro Artisan 2	(Clares)	£59.00a
Pro Artisan 24	(Clares)	£99.00c
Prophet 2 Accounts	(Apricote)	£163.00c
Render Bender v2	(Clares)	£45.00a
Replay Starter Kit	(Acorn)	£40.00b
Revelation ImagePro	(LL)	£163.00c
Rhapsody 3	(Clares)	£93.00a
Rhythm Bed	(Clares)	£45.00a

RiscCad Professional

S/U	(Davyn)	£199.75c
Education		£159.80c
Site Licence		£581.62c
Serenade	(Clares)	£93.00a
ShapeFX	(Datastore)	£12.00a
Sibelius 6 (v3)	(Sibe)	£179.00c
Sibelius 7 Prof. (v3)	(Sibe)	£899.00d
Sibelius 7 Student (v3)	(Sibe)	£499.00d
SmArt	(4Mation)	£41.00a
SmArt Files	(4Mation)each	£17.00a
SmArt File Mod.Lang.	(4Mation)	£21.00a
Snippet	(4Mation)	£38.00a
Sound FX Maker	(CIS)	£39.00a
Termite Internet	(DoggySoft)	£89.00c
TextEase	(SostEase)	£54.00a
TextEase Talking	(SostEase)	£74.00a
TimeCode	(ART)	£29.00a
Titler	(Clares)	£93.00a

Davyn Mart — Risc Technologies — Acorn Centres of Technology

20/20 Finance

Clearly the Best Choice (based on 20% deposit and 0% finance over 20 month period) (Acorn Items Only)

20 months 0%

Personal finance is available to qualifying purchases. Credit subject to status. Written quotation on request.

APR 0%

Topographer	(Clares)	£73.00a
Touch Type	(Iota)	£45.00b
Turbo Driver	(CC)	£51.00b
Twain Drivers	(DP)	£19.00a

Education Software

10 out of 10 Full Range Each £14.00a
Dinosaurs, Driving Test, Early Essentials, English, Ess.Maths, Ess.Science, French, German, Jr.Essentials, Math Algebra, Math Geometry, Maths Number, Math Statistics, Stuct.Spelling.

Adventure Playground	(Storm)	£21.00a
Amazing Maths	(CSH)	£22.00a
Amazing Ollie	(Storm)	£15.00a
Arcventure I Romans	(Sher)	£38.00a
Arcventure II Egyptians	(Sher)	£38.00a
Arcventure III Vikings	(Sher)	£38.00a
Arcventure IV A Saxons	(Sher)	£38.00a
Around World 80 Days	(Sher)	£49.00a
Aztecs	(Sher)	£48.00a
BadgerTrails	(Sher)	£48.00b
Balloons and Zoo	(Topo)	£21.00a
BodyWise	(Sher)	£48.00a
Calabash Pirates	(Storm)	£25.00a
Coffee	(Storm)	£29.00a
Connections	(Sher)	£34.00a
Crystal Rain Forest	(Sher)	£48.00a
Crystal Rain Forest II	(Sher)	£48.00a
Darryl the Dragon	(4Mat)	£21.00a
DataGraph	(Topo)	£30.00a
Farm	(Sher)	£22.00a
First Logo	(LL)	£25.00a
First Page DTP	(LL)	£53.00a
Flossy The Frog	(4Mat)	£26.00a
Flight Path 9+	(Storm)	£31.00a
Freddy Teddy	(Topo)	£15.00a
Freddy Teddy's Adv	(Topo)	£15.00a
Fun School 3/4 (5,5-7,7+) each		£20.00a

(Please Specify age group)

Granny's Garden	(4Mat)	£26.00a
Happy Life	(CCS)	£31.00c
James Pond running water		£29.00a
Landmarks full range	(LL)each	£28.00a
Look Here Talking Topics	(Sh)	£61.00b
Magpie	(LL)	£62.00b
Maths Circus	(4Mat)	£29.00a
MathsMania	(Topo)	£25.00a
Music Box	(Topo)	£35.00a
Naughty Stories V1 or 2	(Sher)	£58.00b
Number Tiles	(Topo)	£25.00a
Ollie Octopus Sk Pad	(Storm)	£16.00a
Oxford Reading Tree Stage 2		
Talking Stories	(Sher)	£45.00b
More Talking Stories A	(Sher)	£45.00b
Oxford Reading Tree Stage 3		
Talking Stories	(Sher)	£45.00b
Oxford Talking Infant Atlas		£21.00a
PinPoint Junior	(LL)	£31.00a
PlantWise	(Sher)	£49.00a
Rosie & Jim Duck	(Sher)	£11.50a
Rosie & Jim Sneezes	(Sher)	£11.50a
ScreenTurtle	(Topo)	£35.00a
Sea Rescue	(Sher)	£29.00a
Selladore Tales	(Sher)	£26.00a
Smudge the Spaniel	(Storm)	£20.00a
Smudge the Scientist	(Storm)	£42.00a
Space City	(Sher)	£31.00a
Splash	(Sher)	£22.00a
Stig of the Dump	(Sher)	£26.00a
Story Starts	(Sher)	£26.00a
Talking Clock	(Topo)	£35.00a
Talking Animated Alphabet		£32.00a
TalkingRhymes1	(Topo)	£26.00a
The Playground	(Topo)	£25.00a
The Puddle & Wardrobe	(Topo)	£20.00a
Time Detectives	(Sher)	£49.00a
TinyDraw/Logo	(Topo)	£25.00a
TinyPuzzle	(Topo)	£20.00a
Teddy Bear's Picnic	(Sher)	£31.00a
Voyage of Discovery	(Sher)	£38.00a
Worst Witch	(Sher)	£29.00a

Games Software

Alderbaran (Sale)	(Evolution)	£10.00a
Alone in the Dark (Sale)	(Krisalis)	£25.00a
Aries 4games	(GamesWare)	£25.00a
Anagram Genius	(4D)	£27.00a
Big Bang	(Psycore)	£14.00a
Black Angel (Sale)	(4D)	£28.00a
Boxing Manager	(Krisalis)	£5.00a
Burn Out	(Oragan)	£23.00a
Cannon Fodder	(Krisalis)	£23.00a
Chuck Rock	(Krisalis)	£10.00a
Cobalt Seed	(TBA)	£21.00a
Crystal Maze	(Sher)	£27.00a
Cyber Ape	(TBA)	£17.00a
Cyber Chess	(4D)	£28.00a
Darkwood	(Eclipse)	£22.00a
Dune2	(Eclipse)	£32.00a
Dune2 CD	(Eclipse)	£45.00a
Dungeon	(4D) 2mb	£29.00a
Empire Soccer	(Empire)	£23.00a
Enter The Realm	(4D) 2mb	£21.00a
E-Type Compendium	(4D)	£22.00a
E-Type Jaguar 2		£29.00a
Fire & Ice		£21.00a
Flashback	(US Gold)	£25.00a
F.T.T. (Sale)	(TBA)	£17.00a
Global Effect	(Eclipse)	£32.00a
Gods	(Krisalis)	£10.00a
Haunted House	(4D) 2mb	£22.00a
Heimdall (Sale)	(Krisalis)	£15.00a
Hero Quest (Sale)	(Krisalis)	£15.00a
Holed Out Compendium	(4D)	£21.00a
James Pond	(Krisalis)	£10.00a
James Pond 2 RoboCod	(G/W)	£20.00a
James Pond running water		£29.00a
Krisalis Collection (Sale)	(Krisalis)	£24.00a
Lemmings	(Krisalis)	£19.00a
Lemmings Oh No More (Sale)		£15.00a
Lemmings RiscPC	(Krisalis)	£24.00a
Lemmings 2 Tribes	(Krisalis)	£25.00a
Magic Pockets (Sale)	(Renegade)	£15.00a
Man United Europe	(Kris)	£10.00a
Populus	(Krisalis)	£25.00a
Quest for Gold (Sale)	(Krisalis)	£5.00a
Revolver	(Psycore)	£14.00a
Real McCoy 2	(4D)	£29.00a
(Apocalypse, Holed Out, Olympics, Inertia)		
Real McCoy 3	(4D)	£29.00a
(PowerBand, Nevryon, Drop Ship, The Wimp Game)		
Real McCoy 4	(4D)	£29.00a
(Galactic Dan, Grievousbodily'Arm, X-Fire,Cataclysm)		
Sally & Wally (Sale)	(Oragan)	£15.00a
Saloon Cars Delux	(4D)	£29.00a
Scrabble	(US Gold)	£25.00a
SimCity	(Krisalis)	£26.00a
SimCity 2000	(Kris)A5000/PC	£33.00a
Simon The Sorcerer	(G/W)	£35.00a
Simon The Sorcerer CD	(G/W)	£41.00a
Small (Sale)	(Virgo)	£15.00a
Speedball (Sale)	(Krisalis)	£15.00a
Spobbleoid (Sale)	(Cybernation)	£5.00a
Spobbleoid Fantasy	(4D)	£27.00a
Starfighter 3000	(Fednet)	£27.00a
Stereoworld	(4D)	£27.00a
Stunt Racer 2000	(4D)	£29.00a
Swiv	(Krisalis)	£10.00a
Time Machine	(4D)	£23.00a
Virtual Golf	(4D) 2mb	£29.00a
Virtual Golf augusta course	(4D)	£20.00a
Zool 1.6m disk (Sale)	(AP)	£8.00a
GamesPad 2player	(G/W)	£33.00b

Special Clearance Offers

subject to availability

5.25 40t bare disc drive		£19.00c
8bit User Analogue Interface		£23.00b
A Mouse in Holland	(EY)	£20.00a
Amazing Maths	(EY)	£17.00a
Doris the Dotty Dog	(EY)	£10.00a
Flossy the Frog	(EY)	£20.00a
Gemini	(EY)	£10.00a
Polyominoes	(Topo)	£25.00a
Podd	(ESM)	£15.00a
Prime Mover	(Minerva)	£30.00a
Pro Driver	(Ace)	£15.00a
StartWrite	(AP)	£8.00a
StartWrite Talking	(EY)	£15.00a
Waiter	(Digital)	£15.00a
Word Works	(CC)	£15.00a
Master Compact Games Various		£3.00

How To Order

Cheques: should be made payable to **Davyn Computers**

Credit Cards: you may also pay by Visa, Delta, Euro, Switch, Electron, or Master Card. We normally make no charge for this, and take no payment until goods are ready for dispatch, We need the card holders address and telephone number, card number and issue number if any and the expiry date.

Carriage: charges are as follows

a	Small	£1.25
b	Medium	£2.50
c	Medium Recorded	£4.50
d	Courier	£10.00
e	Courier Large	£15.00

Official Orders: are welcome from UK education and government institutions (invoices are due for payment within 14 days and are subject to carriage and late payment charges).

VAT is included:

Order Address: please send your orders to:
Davyn Computer Services
'The Workshop'
off Princess Street, Sandal, Wakefield, West Yorkshire, WF1 5NY

Opening Hours:

Monday	9.30 - 5.30
Tuesday	9.30 - 5.30
Wednesday	9.30 - 5.30
Thursday	9.30 - 7.30
Friday	9.30 - 7.30
Saturday	9.30 - 5.30

Terms: All products, prices and specifications are offered in good faith and are subject to change without notice. We Process all orders immediately, but suppliers do sometimes keep us waiting. Goods are guaranteed but are not supplied on approval. Returns and cancellations can only be accepted by prior agreement and there may be a restocking and administration charge A full copy of our terms are available upon request.

E.&O.E 02-09-96

Showroom open Mon-Sat 10-18.00 hrs (All prices now INCLUDE VAT) Carriage not included

CD-ROM Drives

Multi-Session, PhotoCD, CD-DA, White & Green Book compatible. SCSI drives require SCSI card with CDFS >2.20
Carriage: a=£2, b=£6, c=£8

Internal ATAPI CD-ROM Drives

Panasonic 8xCD ATAPI (Tray)	£120b
Cable & Fitting Kit	£10

Above drives are compatible with RiscPC/A7000 only.

Internal SCSI Drives (Tray)

Sony 2x CD SCSI 275ms	£100b
Pioneer 4.4x CD SCSI 150ms	£190b

PCW Verdict - 'It's extremely quick, and a bargain.'

Panasonic 6x CD SCSI 140ms	£199b

External SCSI CD-ROM Drives

Sony 2x CD SCSI 275ms	£155c
Pioneer 4.4x CD SCSI 150ms	£260c
Panasonic 6x CD SCSI 140ms	£270c

For SCSI interfaces refer to Hard Disc section adjacent.

Hard Discs

Carriage: a=£2, b=£6, c=£8

IDE 3½" Bare Hard Drives

Connor 635Mb 12ms	£135b
Connor 850Mb 12ms	£Call
Connor 1.27Gb	£225b

ForA3000/A3010 hard discs see Hard Card section below.

SCSI 3½" Bare Hard Drives

Quantum 730Mb 12ms	£185b
Quantum 1.28Gb 12ms	£255b
Quantum 2Gb	£450b

Syquest Removable SCSI Drives

EZ135Mb Internal	£120c	105Mb Internal	£90b
EZ135Mb Ext.	£120c	EZ135Mb Cartr.	£20a
270Mb Internal	£125b	105Mb Cartridge	£29a
270Mb External	£215c	270Mb Cartridge	£40a

Hard Disc Interfaces/Accessories

IDE interface	£85b	50-50C SCSI Cble	£10a
Morley Uncached	£150b	25D-50C SCSI Cbl	£10a
Morley Cached	£185b	SCSI2-50C Cable	£24a
Cumana SCSI II	£195b	SCSI2-25D cable	£20a
PowerTec SCSI2	£195b	50IDC 4-way SCSI	£15a
External case/psu	£90c	2nd IDE Drive Kit	£15a

zip/jaz Drives

- zip & jaz Drives work just like hard drives except they are removeable, letting you instantly access files and applications.
- zip drives use 100Mb capacity discs & jaz drives use 540Mb/1Gb discs allowing any number of discs giving unlimited capacity.
- The drives are fast. Data transfer speeds around 1Mb/s for zip drives & >2.3Mb/s for jaz drives - ideal to backup your hard drive.
- Each drive comes with 1 year warranty and a starter disc.
- These drives require a SCSI card that is suitable for removeable devices.

Internal zip drive (5¼")	**£185b**
External zip drive	**£185b**
Single 100Mb zip Cartridge	£15a
Pack of 5 zip Cartridges	£65b
Internal 1Gb jaz drive (3½")	**£460b**
External 1Gb jaz drive	**£530b**
Single 540Mb jaz cartridge	£Call
Single 1Gb jaz cartridge	£110a

TopicArt

TopicArtCD1 £30a

This CD-ROM Contains over 2000 ClipArt files, each in Draw, ArtWorks & EPS formats + Replay Movies & demos

Floppy discs £8a each

Single disc clipart containing approx. 50 high quality draw format clip art images on each disc, on a single subject. Comes with mono reference sheet. 20 subjects are available now. Please specify when ordering. Site licence is included.

1	General	11	Tools
2	Transport	12	AnimalsGB
3	Costumes	13	Chemical Hazard Signs
4	Entertainment	14	Fire/Emergency Signs
5	Bugs 2 Slugs	15	Hazard Signs
6	Road Signs	16	Safety Signs
7	Sports Equipment	17	Xmas1
8	Sports Figures	18	Xmas2
9	Dinosaurs	19	Xmas3
10	Symbols	20	Xmas4

RiscPC Computers

All Acorn computers include 1yr on-site maintenance. 3yr On-site is available. **Carriage included on computer systems.** For PC Cards see PC Card section below. **Please note that a backplane is not fitted to RiscPC600.**

With 14" Monitor (AKF60)

RPC600 4MHD540	£1299
RPC600 4MHD540+8xCD	£1399
RPC700 5MHD540	£1549
RPC700 5MHD540+8xCD	£1649
RPC700 10MHD1Gb	£1799
RPC700 10MHD1Gb+8xCD	£1899

With 17" Monitor (AKF90)

RPC600 4MHD540	£1699
RPC600 4MHD540+8xCD	£1799
RPC700 5MHD540	£1949
RPC700 5MHD540+8xCD	£2049
RPC700 10MHD1Gb	£2199
RPC700 10MHD1Gb+8xCD	£2299

Subtract £50 for iiyama MF-8617E
Add £50 for iiyama MT-9017E

RiscPC600 MkI's! from £979 with StrongARM option. Ring now for details

StrongARM

Only £116.33 with RiscPC's
(If purchased before end Dec '96)

20/20 Finance

on Acorn Systems (0%APR)

20% deposit (min) & 20 interest free monthly payments. Min loan £700, Maximum loan £1480. Available subject to status. Ring for details.

A7000 Computers

With 14" Monitor (AKF60)

A7000 4MHD540	£1015
A7000 4MHD540+4xCD	£1075

QuickLynk (v1.04) £32a

With 5m Local Cable	**£39a**
With 10m Local Cable	**£45a**
With 20m Local Cable	**£52a**

QuickLynk allows you to access another unattended RiscOS computer remotely using the serial port via modems or locally using a cable to connect the 2 computers. Each computer can be configured to allow access to any attached filing system device eg ADFS, IDE, SCSI, CDFS, etc. Once connected, files can be transferred to/from the remote computer. Other features include password access, auto dialler with phone book and chat mode to send messages to remote computer/user. Transfer rates up to 1.9 kbytes/s can be achieved with older computers, eg. A410, A3000, rising to 11.4 kbytes/s on the RiscPC range. The transfer rate is limited by the speed of the serial port. QuickLynk cannot at present be used directly from programs/command line. Requires RiscOS 3.10 or greater, ring for details.

QuickTile (v1.03) £29a

QuickTile allows you to create posters from ANY RiscOS application, including Impression. Simply enter the size of poster required & select PRINT from the application! QuickTile does the rest, printing each tile with crop marks and tile references. New features include the facility to print inverted crop marks or no crop marks. QuickTile can only be used with the RiscOS printer Driver or TurboDrivers.

Requires RISCOS 3.10 or later.
Return disc to upgrade for £4.
Upgrade from Tiler for £18.

Mail Order - 0161-474 0778 (All prices now INCLUDE VAT) The lowest prices without compromise

RiscPC PC Cards

A=Upgrade from ACA42 or bought with RiscPC, B=purchased seperately. Carr.: £8

PCCard	A	B
5x86-100	£350	£579
486DX4-100	£233	£350
486DX2-66	£175	£290
486SX33	N/A	£230

RiscPC Upgrades

Carriage: £3 for Sound Cards

StrongARM Upgrade	£293c

The £117 StrongARM price is valid for RiscPC systems purchased before end December '96.

YES 16 bit Mozart Card	£70
2nd Slice Case	£116c
Window '95 CD (Full)	£99a

Memory (Carriage £3)

Call for latest prices, they MAY vary.

RiscPC/A7000 SIMMS

4Mb	£30	8Mb	£45
16Mb	£95	32Mb	£205

RiscPC VRAM

1Mb	£105	2Mb	£130

1-2Mb u/g (exchange)	£60

Call for details and prices of memory upgrades for other Acorn computers.

Monitors (Carriage £10)

Older computers will require an adaptor	£12
AKF50 14" 0.28dp	£315
Ilyama MF-8617E 17"	£590

High spec FST Tube with 0.26" dot pitch

Ilyama MT-9017E 17"	£675

Very High spec Trinitron tube with 0.25" stripe

Printers (Carriage £8)

Canon BJC-210	£190
Canon BJ-230	£305
Canon BJC-4100	£220
Canon BJC-610 (720dpi)	£360
HP LaserJets Printers	£Call

Add £47 to above printers for TurboDriver

I³ Networking (Carr. £6)

A30X0 EtherLan 102	£140
Archi EtherLan 514	£140
RPC/A7k EtherLan 602	£120

Add £17 to above prices for Access+.

NetCubes	**£Call**

Easy to install 10baseT Hub pack for up to 6 computers. Ring for more information.

Portable Computers

Carriage: a=£2, b=£6, c=£8

Pocket Book II (256k)	£240b
Pocket Book II (1Mb)	£280b
Psion 3a (1Mb) (spec.)	£295b
Psion 3a (2Mb)	£365b
AutoRoute Express UK/Eire	**£62a**

- 'one of the best packages for the PB/3a

A-Link	£49a	PC Serial Link	£60a
Parallel Link	£28a	Mains Adaptor	£15a
128k RAM SSD	£45a	512k RAM SSD	£125a
256k Flash SSD	£50a	512k Flash SSD	£85a
PB/Ps3 Games	£Calla	PBII/Ps3a Games	£38a

Hardware Upgrades

24i16 Card (1Mb)	£450b
FPA for 25MHz ARM3	£67a
iTV TV Tuner & TTX	£150b
Joystick I/F (Not RiscPC)	£30a
Logitech Mouse (Acorn)	£26a
Midi Max Card (CC)	£79b
Movie Magic (CC)	£275b
Scart Cable (9 or 15 pin)	£12ea.a
Serial Upgrade (A3000)	£22a
25W Speakers (mains)	£35b
80W Speakers (mains)	£45b

Modems (Carriage £8)

USR 14.4Vi Sportster	£115
USR 33.6Vi Sportster	£195

Modems come with a 25-25 PC wired cable & 25-9 adaptor which may hinder the printer port. A 9-25 way cables is available at £10 See below. A3k/Archi req. Archi wired cable.

ANT Internet Suite	£115a
ArcFax	£32a
Dual Serial Card	£104b
9-25 Archi or PC Wired Modem Cable	£12ea.
3-way Serial T-Switch (incl. comm. cable)	£32

Scanners (Carriage £8)

ScanLight Video 256	£215

Epson Colour Scanners, include !TWAIN & ImageMaster. Bundles include CorelPaint & OCR software suitable for PC Cards.

GTx-5000 Para bundle	£425
GTx-5000 SCSI bundle	£499
GT-5000 SCSI (bare)	£425
GTx-8500 bundle	£660
GT-8500 (bare)	£569
GTx-9000 bundle	£Call
GT-9000 (bare)	£Call

Hard Cards/Multi-Pods

See top for other hard discs. Carriage £8

A3010 Hard Disc Multi-Pod

80Mb+User Port	£210
130Mb+User Port	£275
160Mb+User Port	£320

A3000 IDE Hardcards

80Mb + User Port	£170
130Mb + User Port	£210
160Mb + User Port	£255

Printer Consumables

Carriage: £2 for Cartridges, £8 for Toner

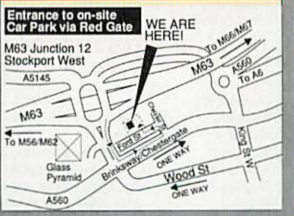
BJ-10 (BC-01)	£18	BJ-200 (BC-02)	£19
BJ-210 (BC-05)	£28	BJ-300 (BJI-642)	£16
BJC-600 Series		**BJC-4000 Series**	
BJI-201HCbk Black	£10	BCI-21Bk Black	£9
BJI-201bk Black	£6	BCI-21C Colour	£17
BJI-201C/M/Y	£8 ea.	BC-20 Fast Black	£28
BJC-800		**HP DeskJets**	
BJI-643 Black	£18	Mono	£23
BJI-643C/M/Y	£23 ea.	Colour	£25

Epson Stylus Colour	Black £16/Colour £26
Epson Stylus Colour II	Black £20/Colour £26
C3903A Toner (LJ5P)	£64
EP-L Toner (LBP-4/HP LJIII)	£64
HP 92274A Toner (HP LJ4L)	£60
Swift24 Mono/Colour Ribbon	£8/£16

Terms & Carriage

Carriage: To benefit personal callers to our showroom carriage is itemised seperately. The carriage indicated is for single items. Please call us for total carriage when ordering more than one item since it is not cumulative.
Terms: All prices include VAT except books. Carriage is not included unless otherwise stated. Carriage charges apply to mainland UK (excluding remote areas, Scottish Highlands, Chann Isles, IOM), elsewhere at cost. Orders MUST be accompanied by a phone number. Prices and spec's subject to change without notification. Goods subject to availability. Goods not offered on trial basis. Restocking fee on non-faulty returns. Official orders welcome from educational institutes, chq with order under £30. E&OE.

Where to Find Us



RiscOS 3.1 Upgrades

Single Rom set	£37a
10 Rom sets	£290b
Documentation/Discs	£22b
Carrier board (A300/A440)	£25a

Books (No VAT)

Carriage: a=£2, b=£6, c=£8,

Acorn RISCOS3 PRM's	£99.95c
Acorn Volume 5a PRM	£29.95b
Acorn BBC Basic VI Guide	£19.95b
Acorn RiscPC Tech Ref Manual	£49.95c
ArtWorks Made Easy (Dabs)	£5.00a
Budget DTP (Dabs)	£5.00a
'C' A Dabhand Guide (Dabs)	£5.00b
RiscOS 3 First Steps (Dabs)	£5.00a

CD-ROM's (Carriage £2)

CD software for RiscOS

ArtWorks on CD (CC) (Carriage £6)	£100
Childrens Micropedia CD	£98
ClipArt CD 1/2 (CC)	£21 each
Dinosaurs (MS)	£44
Dune II (Eclipse)	£41
Granny's Garden CD	£32
Guardians of the Greenwood	£51
Hutchinsons Encyclopedia	£22
Musical Instruments (MS)	£44
PB Bears Birthday Party	£37
RiscDisc Vol 1 / 2 CD	£17 / £20
Simon the Sorcerer CD	£41

Applications

Carriage: a=£2, b=£6, c=£8

Advantage (Longman)	£52a
ANT Internet Suite (ANT)	£115a
ArcFax (David Pilling)	£32a
ArtWorks (CC)	£100b
Blinds (Quantum)	£25a
Card Shop (Clares)	£23a
Chameleon 2 (4Mation)	£39a
Compression (CC)	£34a
DataPower (IOTA)	£105b
Disc Rescue (Look)	£33a
Easy C++ (Beebug)	£110a
Eureka v3 (Longman)	£110a
FireWorkz Pro (Colton)	£164a
Font Directory2 (Look)	£33a
Font FX (DataStore)	£12a
Graphics Loaders (CC)	£50a
Hatchback (4Mation)	£38a
HTML Edit 2 (R-Comp)	£44a
ImageFS2 (Alt Publ)	£44a
Image Outliner (IOTA)	£54a
Impression Style / Publisher	£75 / £120b
Keystroke (Quantum)	£33a
MacFS / MacFS Lite (CC)	£89 / £53a
Ovation / Ovation Pro (Beebug)	£93b / £184b
Personal Accounts (Apr)	£44a
PhotoDesk (Spacetech)	v.1 £185a/v.2 £245b
Prophet (Apricote)	£171a
PublishArt2 (SmartDTP)	£34a
Resultz (Colton)	£88a
Rhapsody (Clares) v3	£87a
S-Base2 Personal / Developer	£57 / £115c
ShapeFX (Datastore)	£12a
Sibelius 6 / 7	£206b / £920b
Sleuth2 (Beebug)	£110a
SparkFS (Pilling)	£24a
Speech 2! (Superior)	£24a
Studio24 (Pineapple)	£141b
Touch Type (IOTA)	£45a
TurboDrivers (CC)	£50a
Vector (4Mation)	£86a

Games (Carriage £2)

Alone in the Dark (Krisalis)	£30
Birds of War (4D) 2Mb	£27
Break 147/Superpool	£27
Burn Out (Oregan)	£23
Cannon Fodder (Krisalis)	£23
Carnage Inc (4D)	£20
Chocks Compendium	£27
Chuck Rock (Krisalis)	£10
Crystal Maze (Sher)	£28
Cyber Chess (4D)	£27
Darkwood (Eclipse)	£28
Dune II (Eclipse)	£31
Empire Soccer (Maglm)	£27
E-Type Compend. (4D)	£20
E-Type 2 (4D)	£27
Fire & Ice (Times Warner)	£22
Global Effect (Eclipse)	£30
GODS (Krisalis)	£10
Haunted House (4D) 2Mb	£20
Holed Out Compendium	£20
James Pond (Krisalis)	£10
Krisalis Collection	£25
Lemmings (Krisalis)	£17
Lemmings for RiscPC	£24
Lotus Turbo Chall2 (Kris)	£22
Magic Pockets (Reneg)	£23
Man United Europe (Kris)	£10
Oh No More Lemmings	£18
Play it again Sam 2/3	£22 each
Populous (Krisalis)	£25
Real McCoy 2/3/4	£27 each
Repton 3/4 (Superior)	£22 each
Sally & Wally (Oregan)	£23
Saloon Cars Deluxe (4D)	£27
Scrabble (US Gold)	£24
Sim City (Krisalis)	£30
Sim City 2000 (RPC/A5k)	£34
Simon the Sorcerer 2Mb	£35
Spobbleoid Fantasy (4D)	£28
Starfighter 3000 (Fednet)	£27
Stunt Racer 2000 (4D)	£27
SWIV (Krisalis)	£10
Time Machine (4D)	£20
Virtual Golf (4D) 2Mb	£27
Wolfenstein 3D (Powerslave)	£26

Educational (Carr. £2)

10/10 Series	**£20 each**

Early Essentials (over 7), English (6-16yrs), French (8-16yrs), Junior Essentials (5-11), Maths (Number) (6-16), Maths (Algebra) (6-16), Maths (Statistics) (6-16), Spelling (over 9)

Fun School 3 (<5, 5-7, >7)	£19
Fun School 4 (<5, 5-7, >7)	£19
Granny's Garden (4M)	£27
Maths Circus (4Mation)	£29
Naughty Stories Volumes 1 or 2	£58
Playdays (Gamesware)	£24
Ridiculous Rhymes	£Call
Rosie & Jim - Duck loses its Quack	£10
Rosie & Jim - Jim gets the sneezes	£10

Desktop Projects Ltd

Tel: 0161-474 0778

Authorised Acorn Dealer, Fax: 0161 474 0781, Email: info@desktopp.demon.co.uk
Unit 2A, Heapriding Business Park, Ford St, **STOCKPORT**, Cheshire. SK3 0BT

We Accept SWITCH Access VISA DELTA

Acorn Centres of Technology

OCT 96

Graphics

Gemini: Sinchronia's new 3D graphics engine

TOPMODEL is now on sale. But no sooner had news been sent that the full version was on release to the general public, another press statement announced that a new version, with a completely new graphics engine was close at hand. Only a day before this article was written, I recieved an early version of the new engine working inside the useful *TopModel* Viewer application.

The name of the new engine is Gemini. I don't know whether the meaning of the name has any relevance to the workings of the code. Perhaps its just one of those punchy sounding words that sounds punchy as a name for a 3D graphics engine. Does it matter? No. At the end of the day this is a very powerful new engine indeed. It is difficult to directly compare it to the *TopModel* editor as the images produced at the various rendering levels appear different to those from *TopModel*.



The screen shot is the end result of a 5 second redraw (ARM600) with phong shading, the quality matches the highest level of rendering in *TopModel* and although transparency did not work, advanced environmental effects such as depth cued misting (or fog) work beautifully.

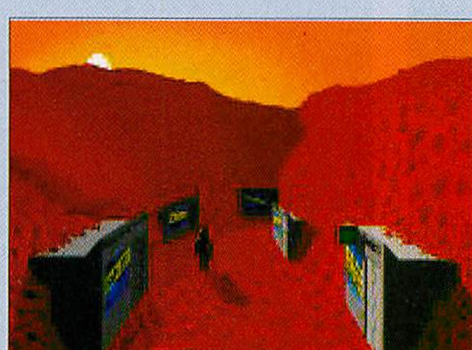
The Gemini engine now allows models to be viewed in 16 and 24bit screen modes, is StrongARM and Hydra compatible and will eventually be able to render antialiased models. The first full application to feature Gemini will be *TopModel Pro*. This, with its promised workstation quality raytracing, modelling and animation will have to be seen to be believed.

Sinchronia are on +39 11 53 91 73.

Pic of the Month

THIS month's Pic winner is Joe Burminster from Birmingham with his image entitled 'MyArt'. The colours and the composition of the image are excellent, but what really interested me about the artwork, was the number of types of graphics package used to create the scene.

On Joe's RiscPC an entire complement of vector, bitmap and 3D modelling were used; *Draw* for the sky and for the shops which according to Joe's information are being assessed by the little man for their liquidation value(!). The man is a product of *TopModel*. I do not know whether you will be able to see it in print but even the face of the man in the spacesuit can be seen through his semitransparent visor.



An early beta of Gemini renders and dithers an 800x900 'AI' in just 5 seconds. Note the fog effect on the hand and foot in the distance of the scene

Printer help sheet

All those who have asked for my Epson Stylus Colour help sheet, should have received the document by now. Unfortunately, most of you had reports of problems rather than help and advice, and my research led me to the conclusion that a manufacturing error rather than software or setup was mostly to blame for problems such as black flooding and washed-out colours.

I would be very grateful to receive more advice and tips from you as it would help bulk up the rather skinny 'answers' part to my questions and answers sheet.

4Mb VRAM

Now this is an issue that hasn't popped up for some time. I received an e-mail asking whether the new RiscPC mother board will feature 4Mb or greater VRAM support. I didn't actually know that there was a new RiscPC motherboard! Acorn have said there may be a future upgrade path for the RiscPC to more powerful motherboards and speculation has it that PCI could become the basis for the bus and that EDO ram in four or more banks will replace the pair of slots reserved for standard SIMMs.

I am sure Acorn realise that a new motherboard would be a great opportunity to bring the RiscPC graphics in line with the power of StrongARMs and the software, specifically bitmap, modelling and DTP applicaitons that will use this family of CPU.

Shareware wonder

Creator version 2 by J Kortink now translates 17 image and graphics formats. I have been recommended it as a very accomplished piece of shareware which even includes formats unknown to *ImageFS 2*.
www.inter.nl.net/users/j.kortink

Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by email to augrafix@idg.co.uk.

Games galore

EVERY month I'm continually amazed and pleased at the number of quality PD games that are being released, and this issue's PD page reveals no exception to this rule. I've done a games special just to keep up with the number of releases.

IYAToV

First up is *IYAToV*. Without wanting to decode the title too readily, this is another of those puzzle games that falls within the ever-increasing grouping of *Tetris* clones.

As with all the best versions of these games, *IYAToV* contains all the regular features including the essential two-player option, but what makes the game different is the use of a seesaw. The Tetris-like blocks fall downwards on to the spring mounted seesaw at the bottom of the screen. Not only do you have to worry about getting too many blocks piling up at the bottom, but you also have to ensure that the seesaw remains relatively well balanced. This can become quite tricky when you find yourself getting several rows of blocks on one side of the seesaw, and rather than helping you out, leaves your situation decidedly unbalanced.

All round good fun, but I found it a tad fast and managed to obtain a rating no better than 'sucker'. On a RPC make sure you use a modified screen mode or *Game on*, else you won't even make sucker.

IYAToV is on the latest subscription disc from APDL.

TDT

TDT offers a new version of the classic wireframe tank game, Battletank. I've always been a big fan of the various versions of 3D tanks that have been kicking around the public domain for the last few years, and although not quite as addictive, Owain Cole's version, *TDT* is certainly worth a look.

The idea of the game is basically the same as 3D tanks, but from a different perspective. Starting off, you're in control of a wireframe tank and have to take on and destroy another enemy tank.

Each level progressively adds another tank, leaving you in a pretty horrendous crossfire by level 5. Instead of giving you a 3D view of the world, you see the action from above. The view zooms in and out depending on how far your tanks are apart. This makes it a little strange to look at in the beginning, but once you've got used to it, it lends *TDT* quite a cool style.

As well as facing the computer controlled tanks, you can also take on a second human player, in *TDT*'s most playable mode. This really makes it into a thoroughly recommended game.

TDT is available from the Digital Databank BBS.

Bomb

This is another game by Owain Cole's group, Visions of the Impossible. Rather predictably, *Bomb* is another clone of the well known *Bomber Man* game, which was made famous on the Arc by *Moonquake*. The aim of the game is to run around a maze, dropping bombs to kill your opponents. This is one of the classics of multi player design and VotI do a reasonable job at reproducing it here.

The group's aim was to build on everything in *Moonquake*, and extend the game to six players. This immediately brings in the problem of getting this many people round the keyboard, never mind the endless key clashes you'll have if you're playing on a Risc PC.

Fortunately the comprehensive setup screens allow you to play anything from one to six players at once, as well as to define a wide array of game parameters. Each player also has a choice of one of six different characters, each of which has slightly different characteristics. This is good as it adds more interest to the standard games.

Once you're into the game itself, it's a bit of a shock to see the graphics. Each level is randomly picked at the start of the game, and different graphics are used for the walls and rubble. This takes some getting used to, as it's not immediately clear what each square represents. This is another feature to add some variation, but it didn't really improve the gameplay. On the whole the graphics are pretty poor, with the pictures of the characters being particularly embarrassing.

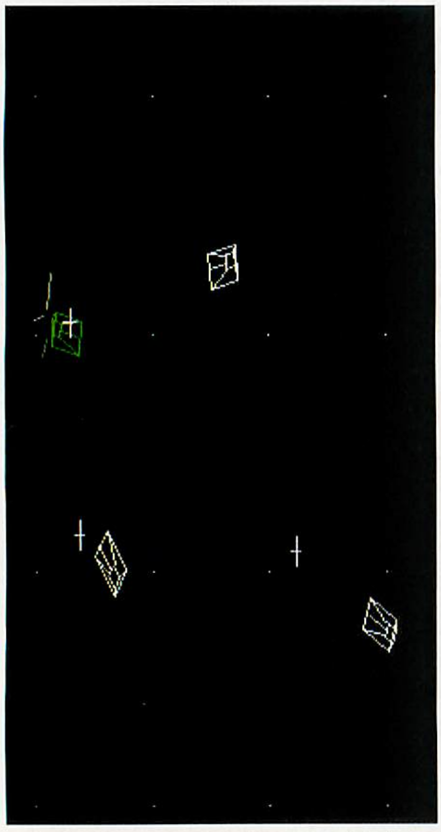
On the playability front, *Bomb* didn't seem to have quite the same edge as *Moonquake*. I wasn't entirely satisfied with that version of this type of game, but despite *Bomb*'s improvements in several areas, the lack of decent graphics really holds it back.

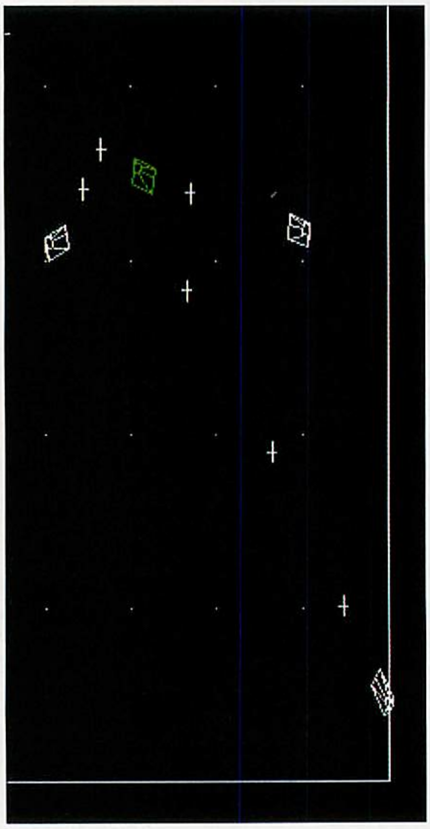
Having said that, this is one of the few games that allows more than two players so it has to be worth trying out. What we really need is a graphically polished version, with mind blasting stereo sound and highly animated explosions.

Bomb can be found on the Digital Databank BBS.

Gek again

As promised last month, here's a second review-fest of games from Gek. *No-Windows* is the ideal game to take out





Tanks for the memory: Wireframe nostalgia from Digital Databank BBS

your frustration on after an enforced session on a PC. The aim is to shoot flying icons that look suspiciously like the logo of a certain well known PC company.

The icons come flying out of the sky at high speed, leaving you to pick them off using your mouse pointer controlled gun. It's not the most long lasting game, but worth a laugh when you hear that satisfying shooting sound as you take out the Windows icons.

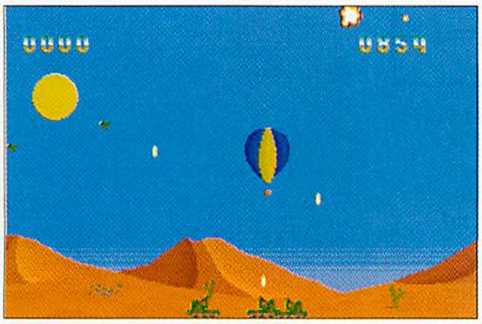
No-Windows is on disc GA091 from the Datafile PD library.

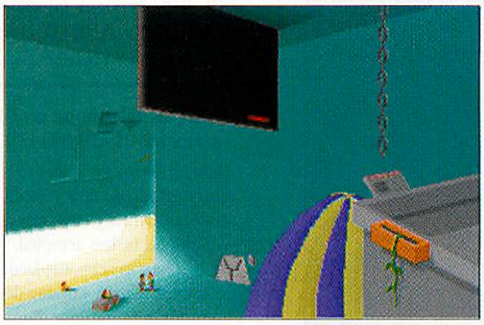
Balloon Invaders is the second of Gek's unusual offerings this month. The idea is to support your army by bombing various targets from a new military secret weapon – a hot air balloon. Using a sideways scrolling style, you control the balloon via left, right, burn and drop bomb keys. It's really simple to control and get into and includes a good range of missions to fly.

Despite featuring this highly improbable scenario, *Balloon Invaders* is quite fun to play, but can be a little frustrating. Not surprisingly, your balloon isn't hard to shoot down, but it's not just the massing anti-aircraft guns you need to worry about. Enemy helicopters buzz round you in an attempt to down your craft and, even worse, the local bird life seems to enjoy homing in on and puncturing your balloon with their beaks! Having said that, it's still great value for PD.

Balloon Invaders is on disc GA093 from the Datafile.

As with all the other games reviewed this issue, you really can't beat the playability of these free games, while the commercial market is so stagnant.





Recommended PD Libraries

The Datafile, 71 Anson Road, Locking, Weston-Super-Mare BS24 7DQ

Naked PD, 'Fayence', Fulford Road, Stoke-on-Trent, Staffs ST11 9QT

Arch Angel PD, PO Box 41, Exeter EX4 3EN

APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN

Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ

Beebware PD, 83 Forrest Road, Huncote, Leicester LE9 3BH

ARM Club PD Library, Freepost ND6573, London N12 0BR

Risc World PD, 1 Standhouse Lane, Aughton, Lancs, L39 5AR

Software requests

I'VE had some response to the request for multi-tasking sound sample replay suitable for desktop use in other programs. Rick Hudson from New Zealand suggests his Soundcon player. Although it doesn't fit the bill directly, it could prove useful with minor modifications.

There's also Rick's *Playit* software which is currently being used by several developers in other software. According to Rick: 'It is currently being used by a small number of application writers as their sample playing engine and I've had good feedback about it. It's much simpler to use (than *Soundcon*) but it isn't an application as such. It can auto detect and play a reasonable number of formats meaning that it only needs to be given the filename and it will play the sample in the background from disc.' For further information, contact Rick by email at: rick@actrix.gen.nz.

Dis-le author Mike Smith was also kind enough to remind me of David Radford's sound player and compression utilities, which I should have mentioned after the initial request. David's programs can be obtained from the HENSA ftp archive on the net. Apologies to David for not mentioning his excellent software in this context before.

As always I'm still on the look out for more software requests and would love to hear your views on the PD scene. I'm always on hand to answer your PD queries, but please remember to include an SAE. E-mail is a faster alternative however and also throughout the summer I'm regularly online on the Digital Databank BBS as Cob.

Lunchtime 6

The next version of *Lunchtime*, the very popular and incredibly strange disc magazine, is nearing completion. Most of the graphics and articles are ready and Andy expects the magazine to be released very soon.

A PC version of the magazine will probably be released although it's unlikely the team will leave the Acorn scene unless, as Andy puts it, 'someone gets a petition together'. Full details are in the PD Unlimited section of the Digital Databank BBS. When it arrives, *Lunchtime* will be available from there and the Datafile PD library.

Make-a-RPC

Following on from my 'Acorn Developments' comment in the August issue, views are understandably split between the RPC owners wanting more RPC software and the rather miffed Archimedes owners who can't quite make the upgrade.

As relief for the latter, Dave Thomas and Justin Fletcher (with a little graphical help from Dominic Esplen) have come up with a highly unusual solution. Make-a-RPC allows you to construct a RiscPC from the safe environment of your RISC OS 3.1 desktop. Graphical icons and a cunning drag and drop system allow you to assemble anything, from a lowly stand-alone single slice, 5 meg system (so you can pretend to be a PD editor) to a complete network of 5 slice, toaster-bearing super machines.

As the Make-a-RPC team puts it: 'Hours of wholesome entertainment for bored people!.' Make-a-RPC is on the Arcade BBS, and is also available from Dave's web site at: http://www.cms.livjm.ac.uk/www/homepage/cmsdthom/index.htm.

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to aupdeditor@idg.co.uk.

Acorn

2Mb A3010 computer plus £200 worth of 1st class Acorn software for only £185 (£217.38 inc VAT)

A Special Offer from CASTLE TECHNOLOGY

Last few remaining

Acorn User Best Dealer Award 1995 - Runner-up

Available now while stocks last! Call 01728 621222

SOFTWARE:

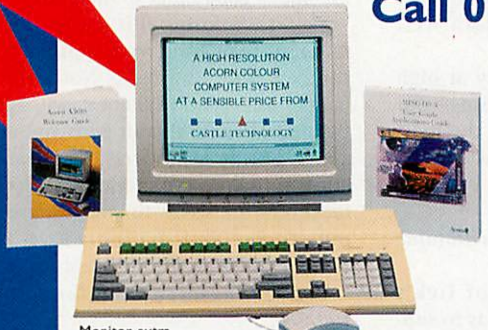
StartWrite (Wordprocessor), **Application Suite**, Mouse Mat, software brochures and **discount vouchers**, *PLUS* choice of Options 1 or 2 below (£39 extra for both together)

Option 1 - **Early Times Bundle.**

Artisan 2. Art package from Clares.
Doris the Dotty Dog. Naughty story from Sherston.
Daryl the Dragon. Adventure story from 4Mation.
Amazing Maths. Mental arithmatic from Cambridgeshire Software House.
Gemini. Matching pair game from Cambridgeshire Software House.
Maths Gen. Maths worksheet creator from Cambridgeshire Software House.

Option 2 - **Home Bundle.**

Resultz. Spreadsheet from Colton Software.
Desktop Database. Database from Iota.
Revelation. Art package from Longman Logotron.
Zool. Fantasy arcade game from Gremlin.



Monitor extra

Connect our amazing offer to your TV, or use any of the options below to create a high specification computer system:

Hardware Options:

- 2-4Mb RAM
- High resolution colour 14" monitor
- Hard Drive (120Mb, 200Mb, 500Mb)
- SCSI Interface
- CD-Rom Drive
- MIDI Interface
- Printer

Etc., etc.

ORDER 10 - GET 1 FREE!
Order 10 computer systems with hard drives and monitors and we will supply one of our Special Offer 2Mb A3010 computers FREE!

ORDER NOW!

Order by telephone on 01728 621222 or Fax on 01728 621179.

Delivery £9 per computer (£10.58 inc VAT).
Cheques*, debit cards (Switch & Delta), credit cards(2% charge may apply), and educational orders accepted.
All trademarks acknowledged.
*Cheques: allow 5 working days to clear.

THE A3010 COMPUTER

The A3010 is ideal for schools, small businesses and, of course, in the home. The A3010 shares the same processor and main electronics as the A3020 & A4000 computers. It has one internal expansion slot, a serial port, two joystick ports and a parallel printer port.

The Castle Technology Product Range

Scanflat • from £349
- Flatbed SCSI scanner
- Fits all Acorn computers with SCSI interface
- ImageMaster software included
- Fast scanning speed - 3.6ms per line
- Twain compliant

CD-ROM • from £65
- Supplied with Acorn Driver
- Choice of SCSI or IDE interface
- Free headphones, Photoview & Audioplayer
- Compatible with Kodak Photo CD
- Internally or externally housed

Hard Discs • from £89
- 2.5" or 3.5" sizes
- Fast access of up to 8ms
- 20Mb to 2Gb capacity
- Formatted and soak-tested
- Interface may be required

Light Pen • £199
- Suitable for all Acorn computers
- Menu & select buttons on pen
- Instant response time
- Three colour aluminium or plastic casing
- National Curriculum "input device"

Ergo Keyboard • £99
- Built in wrist support
- Tested to 30 million operations
- Quiet, tactile and curved low profile keys
- Full two year guarantee
- International versions available

SyQuest Removable Drive • £199
- 3.5" 105/270 Mb capacity
- 5.25" 200Mb capacity
- SCSI or IDE interfaces
- Programmable power saving modes
- Internal or externally housed

SCSI Disc Share • from £199
- Suitable for all Acorn computers
- Easy to use and manage
- Share CD ROMs, scanners and printers
- The fastest disk sharing system
- Plug-in and go installation

IDE and SCSI Interfaces • from £65
- Designers of interfaces since 1988
- Connect your computer to hard drives etc
- Up to seven devices per interface (SCSI)
- Available for all Acorn computers
- Transfer rates of up to 4.5Mb/sec



Ergo Keyboard



Ether-SCSI Interface

AN EXPANDABLE SCSI EXTERNAL CD-ROM

for any Acorn computer (except A4) for only £99 (£116.33 inc VAT)

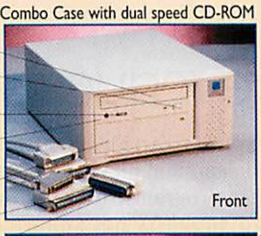
Dual-speed CD-ROM in Combo Case c/w 25/50 SCSI cable, power cable, headphones, CD driver s/w for any SCSI card and full 1 yr warranty (SCSI I/II interface inc CDFS req'd)

Centre of Technology — Acorn — Centre of Technology

Available now! Call 01728 621222

The unique expandability of SCSI makes it so easy to install extra SCSI hardware, and Castle Technology is delighted to make this once-in-a-lifetime CD-ROM offer. Make use of the wealth of CD-ROM material available as well as playing audio CDs direct from your computer.

Combo Case with dual speed CD-ROM





Replay, Audio player, PhotoCD etc compatible

SCSI II INTERFACES from £66
(when bought with CD-ROM):
A3000, A3010, A3020, A4000 **£66** *(£77.55 inc VAT)*
A310, A400, A540, A5000, RiscPC, A7000** **£72** *(£84.60 inc VAT)*
Castle Technology's plug-&-play software allows up to 7 SCSI peripherals to be connected. Free software includes !Setup (SCSI) PhotoView, CDPlayer, and !Change FSI.
*Backplane may be required

**Use spare slot for other SCSI devices:*
Hard drives up to 2Gb from £39 (100Mb), Panasonic PD (600Mb optical + CD), SyQuest, Jazz, Zip etc. removable drives.
Other SCSI devices available:
Scanners (600dpi-1200dpi), Faster CD-ROM drives,

Delivery £10 per item. 2% credit card charge may apply

Castle Technology Ore Trading Estate Woodbridge Road Framlingham Suffolk IP13 9LL **Telephone: 01728 621222**
Fax: 01728 621179 e-mail: sales@castle-technology.co.uk Web: http://www@castle-technology.co.uk.

Comms

Will you lose your sanity with BrainStorm BBS?

YOU might think that Helen Rayner is losing her sanity by trying to beat the record for spending the longest time staying at the keyboard and not going outside. This, though, is nearly normal behaviour for a dedicated Sysop of a BBS like BrainStorm, which students Helen and her sister Angela run in Borough Green, Kent. Running a BBS can be so absorbing that it's difficult to tear yourself away from it.

BrainStorm BBS started in November 1995 as a part time system but is now online 24 hours a day. The *ArmBBS* system runs on a Risc PC 700 and connects via a Sportster 14400bps modem. The BrainStorm filebase has a good selection of Acorn software, and includes special areas for coding groups such as *Arm'd and Dangerous* and *Gilbert the Hamster* software.

Helen's system has gone though several design phases but has ended up with neat menus and useful options for BBS users. Access to CD-ROMs is provided by Chris Jackson's *CD-Door*, and there are plenty of examples of colourful graphics in the ANSI Gallery.

The Entertainment section features many of the well-known online games doors, including a new one called *Super Slots* from Matthew Page of the ARM Pit BBS. This game, described as 'the ultimate one armed bandit game for Acorn BBSs', seems to have taken the BBS world by storm, popping up all over the place and it is good fun. Perhaps this is because you start off with £500,000 in the bank!



Storming down to Kent

BrainStorm BBS has nearly 200 users and over 800 files. You can usually find Helen in and ready to chat, so a call to BrainStorm could be a very pleasant way to spend the weekend. By the way, Helen, the EEC regulation for VDU breaks is five minutes away from the screen in every hour, so I'd put the record attempt on hold if I were you.

BrainStorm BBS
(01732) 886638

!DigiMail – a specialist off line message reader

I FIND it virtually impossible to read all the electronic information that comes to me in the form of press releases, World Wide Web pages, Usenet newsgroups, BBS scratchpads and e-mail, and I often feel only a mouse-click away from information overload.

Off Line message Readers (OLRs) give you a way of organising incoming messages so that you don't need to read everything, but give you that option if you want it, and what you do read is in your own time if you have enough of it.

The classic Acorn BBS OLR is *!ReaderS* by Anthony Frost, still used by many people, and having mentioned more recent programs such as *!OLRead* by Alex Hayward and *!ReadMail* by Justin Fletcher, which have in-built customisation for Arcade BBS, it's time to look at *!DigiMail*, which comes set up for The Digital Databank BBS.

!DigiMail is a development of Marc L.Veary's *!EasyMail*, based on the S-Base programmable database system published by Longman Logotron, and is licensed for use as Freeware but not for distribution. The program installs on your icon bar and you drop a 'DigiBank' message scratchpad onto it.

The OLR window that opens shows the message text and header information in system font, preserving any ASCII graphics or tabular information. A button bar at the top left gives access to the next or last message in the message area in either direction, or jumps to the next area. A very useful feature built-in enables decoding of message-embedded Uuencoded files.

There are more buttons at top right that allow access to an address book, creating replies, and other useful facilities. The 'Listing' button shows the subject, author and recipient of each message in a mixture of system and fancy fonts that makes it very easy to choose what to read and what to ignore.

One of my few criticisms is that the message window view is limited to about 22 lines of text. *!DigiMail* comes with help documents, but is designed to be very simple to use. It is available only from The Digital Databank BBS which holds the copyright.

Digital Databank BBS
(01707) 329306/323531

URL of the month – Tornado

Niall Douglas states the three objectives of his *tornado* project like this. *Tornado* is designed to increase productivity, be frugal with resources and remove as much programming from the coder as possible. *Tornado* isn't all written yet, but Niall has all the concepts of his alternative pre-emptive, multithreading, multitasking operating system for the ARM processor fully specified. Read more about this interesting project on his web pages.

Tornado Home Page
http://www.armature.net.au/~tornado/

Pilling's pages

Some of the best value graphics and comms software, most of which has become the *de-facto* standard for online Acorn computer users, is written by David Pilling. His new Web site contains his software catalogue, access to free programs, demos and upgrade kits for existing users, as well as StrongARM news and useful links.

David Pilling
http://www.netlink.co.uk/users/pilling

Ubik BBS alors

For a French flavour try a weekend call to Ubik BBS, the first Acorn BBS in France. Ubik runs Armbbs on a 9Mb Risc PC 600 with 1.5Gb filebase specialising in Acorn RISC OS files. The BBS is online 24 hours, so you can actually call anytime. The Sysop's name is Frederic, and Ubik offers all the usual ArmBBS facilities.

Ubik BBS
(00 from UK) +33 1 4084 9889

Contacting me

Send me any Acorn-interest URLs you find, and I'll publish a selection. You can contact me by writing to David Dade, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP, or by e-mail to: DaviD@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181 654 2212.

Bonjour Berlitz

IF you, like me haven't studied a language since you were 16 and can't remember anything about verb endings and past tenses yet need to communicate on the continent, the *Berlitz Phrase Book* could be for you.

The *Phrase Book* contains approx 2,000 phrases in 13 different languages including French, German, Spanish, Dutch and Japanese. The program categorises the phrases into six main sections: travelling, accommodation, talking, eating out, town and emergencies. Within each category are large number of sub-categories enabling you to find the phrase you need quickly and easily.

Each phrase is displayed in English with the relevant translation at the bottom of the screen. Once you have found the relevant phrase you can click on it, which in turn brings up a new screen containing the English phrase and the translation in a writable window where you can fill in any gaps that may appear in the translation.

For example, if you wanted to say 'My name is Mark' in French the *Phrase Book* would bring up the translation 'Je m'appelle ...'. Using the editable window the word 'Mark' could be entered before attempting to say the phrase or if you prefer show it to the person you are speaking to!

The *Phrase Book* also allows you to build up a script of phrases, enabling you to construct a conversation on the Pocket Book – eg to order a hotel room – before attempting the conversation. This feature can be especially useful if you are preparing to make a phone call as you can just read out the prepared script once connected.

The package also includes the facility to search for particular phrases and also to alter the native language, making it useful to people whose native language is not English.

Overall, *Berlitz Phrase Book* is a superb program which in my opinion is a vital purchase for any traveller who has problems with the foreign languages. The program also has uses in the educational sector as it could be used as a prompt for practising GCSE orals.

It costs £39.95 and is available from Psion plc, tel: 0171-262 5580. Highly Recommended.

Shareware CD – mellow from Yellow

If you are looking for a large collection of shareware and PD, the Internet is the best place to look.

If you don't have a connection the next best thing could be Yellow Computing's *Win-Link 3* CD. The CD contains around 100Mb of shareware programs and a further 300Mb of sound samples, video clips and demonstration files. If you have a PC card the CD also contains free copies of three commercial applications: *Win-Link 3*, *3Base* and *Agenda3*.

The shareware CD contains a *Windows* front end, and if you have a PC card, this is the best way to access all the different parts of the CD in a logical manner. The sound samples can be tested by clicking on the relevant icon before you download them, the windows application can be automatically installed via the front end and the shareware collection is indexed in a sensible manner with each application being accompanied by a description and a screen shot.

The front end also allows you to specify which types of applications you want the index to show, eg games, utils, applications etc. The shareware packages can be automatically installed by double clicking on the relevant application – this saves a lot of time and hassle unzipping files and sorting out file extensions.

If, however, you don't have Risc PC or don't own a PC card, all is not lost. Stored on the disc in ZIP archives are copies of the software. The archives can be un-zipped using *!SparkPlug* and the files copied on to the Pocket Book using *!Pocket FS*.

This method is not as simple as using the *Windows* front end as the file-extensions need correcting once the application has been installed on to the Pocket Book.

The CD contains a good selection of programs for both the Pocket Book I and II, some which I haven't seen before. The applications range from Pac-Man style games to a credit card checker – there is something for everyone. Most of the versions on the disc are the latest ones and each application usually has a help file which tells you how to register (if you need to) and also where to obtain the latest version.

Overall the CD is a good purchase for any Pocket Book owner and comes recommended. The CD is priced at £39.95 which, if you only want the shareware, is a bit pricey but if you have a PC card and would make use of the free commercial applications then it is good value for money.

In the UK the CD is distributed by Widget software and is available either direct from Widget or from most good Psion dealers.

Widget Software (01438) 815444



A king-size shareware collection

Webbed Psion

Psion plc has recently launched its official web site which can be found at http://www.psion.com/. It contains details of Psion's product range, a technical support area, a developers' reference area and links to numerous other Psion web sites. The site is well designed and is well worth a visit.

Readers Top 10

I'm currently interested in compiling a readers' top 10 of Pocket Book and Psion software. I want the list to be all encompassing including PD, shareware and commercial programs. Readers can vote by sending me their top five software programs either by e-mail or by writing to me at the usual *Acorn User* address. The completed list will be featured in this column and on the (hopefully) forthcoming *Acorn User* Portables Page Web Site – more details next month.

RTF Ovation

Users of *Ovation* who have spent the last few years suffering due to its inability to import files from the Pocket Book in RTF format, can now rejoice. *Ovation Pro* is supplied with a filter which allows RTF documents to be imported easily. The importer can cope with most RTF commands and in the next column I will be taking a detailed look at the abilities of *Ovation Pro*, *Impression* and *Fireworkz* when it comes to importing these files.

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by email to auport@idg.co.uk.

Business

Leasing – a viable alternative

I HAVE recently had some experience of leasing Acorn computers and thought it might be useful to pass those experiences along to business users and others who might be considering it as an option. Generally leasing is a very cost effective method of acquiring computers. It has a number of very substantial benefits for the business user. Cash flow and budgeting are always a problem and the capital required to finance a number of new computers is always both hard to find and generally expensive.

Leasing allows you to budget a certain amount and know, to the penny, how much it will cost over the lease period. If you can afford £8,000 a year over three years, you can finance £20,000 worth of IT equipment. The figures are very approximate because leasing is usually done in bands, with different multipliers depending into which band you fall.

More illustrative figures are given in the current Xemplar Summer catalogue. As the minimum figure is usually about £1,000 you can see that leasing becomes economic very quickly in almost any situation where more than one computer or one high end Risc PC is required.

Education may have low-cost finance deals but even so, leasing makes sense if large numbers of computers are required on a tight budget – although this option is not currently available to Grant Maintained schools. Many companies have a strategy where an amount is set aside annually with a view to eventual replacement.

This strategy is fine but can lead to piecemeal IT. New computers using old printers or old computers falling gradually into disuse due to lack of funds to replace all computers may result. That way lies reduced productivity.

Leased computers are legally the property of the leasing company but the responsibility of your company – it makes good sense then to ensure the extended warranties cover the goods for the period of the lease. It is something less to worry about and although it can appear expensive, so can repairs. Extended warranties on Acorn computers taken at the time of purchase cost 6 per cent of the value of the goods. It becomes more expensive if you buy them later and difficult to write into the lease agreement.

On the subject of ownership, most lease agreements give the option to buy the goods outright by paying a fixed amount at the end of the agreement. With PCs this is almost always not worth doing as they have little or no residual value after three years and none after five.

Acorn computers have greater economic longevity – just look at the number of old A310s and A3000s still being used. Leasing should be seen as a cyclical process – as one lease ends another should begin. This should ensure that your company is never using equipment that is more than three years old.

You may wonder why three years keeps being mentioned – well even in the Acorn world something new comes along which renders older equipment less desirable/functional in this time.

Remember you can never buy the future, so waiting for the next innovation or the price to fall simply means you are not having the benefits of IT currently available.

While there are many benefits to leasing Acorn equipment, other points must be considered. The reading of the small print is a good idea, as is seeking professional advice from your accountant. Completing the lease form is not that straightforward and neither is the method of calculating repayments – I certainly found a spreadsheet useful.

Help is available from Anglo Direct, who handle the leasing for Acorn. In conclusion, leasing may offer a viable alternative to the financing of Acorn computers and should be among the options explored by any business user.

Anglo Direct can be contacted on 0171-712 4300.

No lack of relational databases

FOLLOWING my assertion regarding the lack of relational databases on the Acorn platform in the last column, I received an e-mail from John Skingley of Circle Software.

He rightly pointed out that the excellent *Impact2* (a successor to the earlier *ImpactPro*) has been available since July 1993. In John's own words: '*Impact2* is a very easy to use *fully* relational database, allowing multiple user named indexes, data filters and field selections.

'It has an impressive report system which merges data directly into *Impression*, and has the best label printing system anywhere. It sells very well and we have a very loyal customer base. It normally sells for £95 + VAT, but is on Summer Offer for just £76 + VAT.'

I apologise for overlooking *Impact2* and will deal in more detail with the subject and use of relational databases in business in a future issue.

Circle Software are on (01208) 850790.

Killer Apps

Again following my last column a correspondent pointed out that we do have our own Acorn Killer Application. Just to remind you, a killer application is one piece of software so good it justifies buying the computer it runs on.

He said that his nomination for this category was *Sibelius*. I have to agree that those in the music business looking for the best music composition software need look no further than *Sibelius* running on the world's best platform.

Contact Sibelius Software on (01223) 302765 or e-mail info@sibelius.demon.co.uk

Help please

All this correspondence certainly proves that the Business Page is proving a popular – if somewhat controversial – read. I am in need of more stories about the use of Acorn hardware and software in businesses large and small. E-mail me and guarantee a reply and a possible feature on a future page.

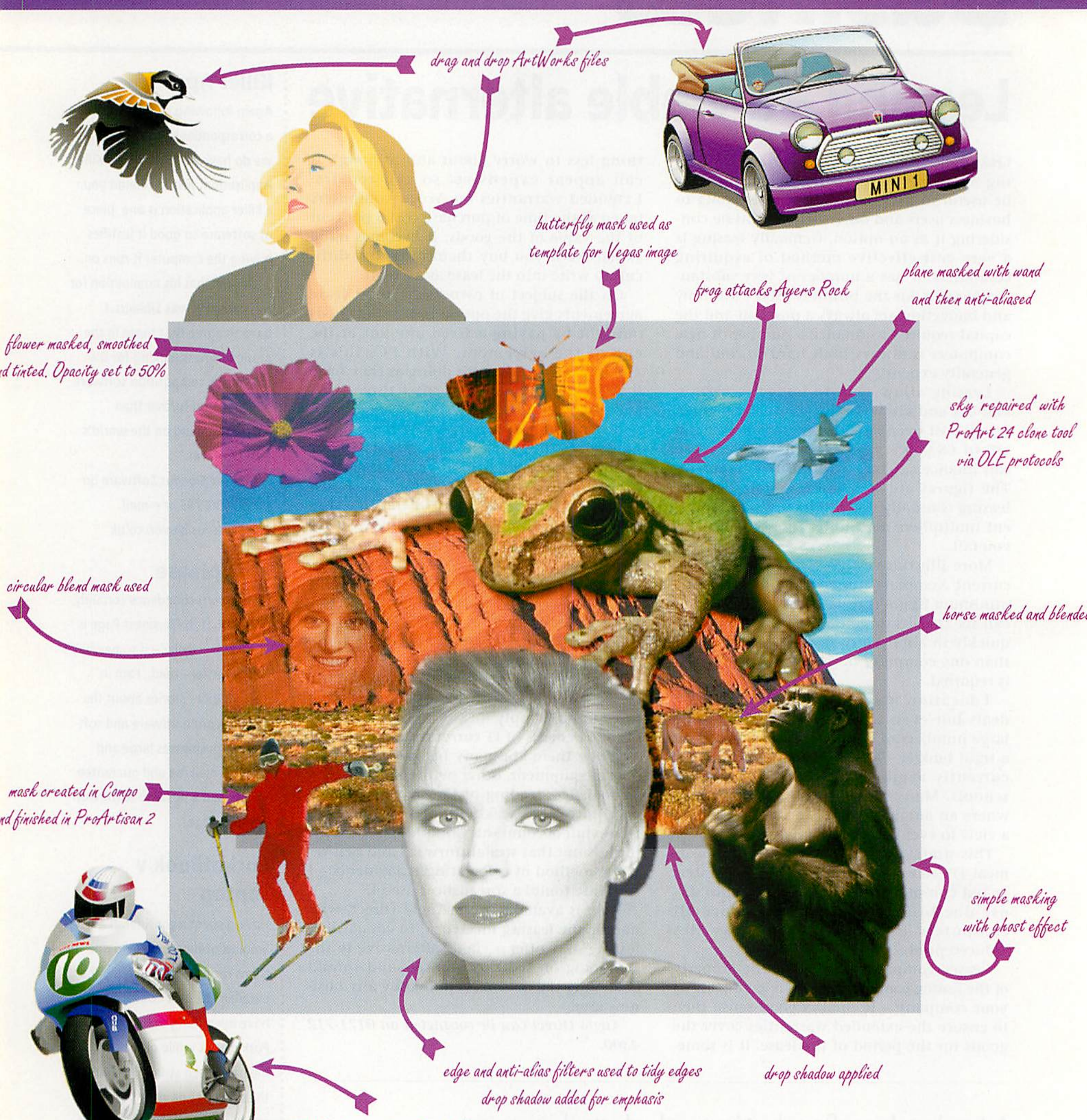
PocketBook v Laptop

Having spent a considerable amount of time travelling on trains recently, (fortunately the excellent BR East Coast Line), I have been using my Acorn Pocketbook while others around me have been struggling with their power hungry laptops. The question that struck me was, do we need a new laptop when we have such a versatile computer as the PocketBook? Answers by e-mail please.

Contact

You can contact me, Mike Tomkinson, by post at the usual *Acorn User* address or by dropping me an e-mail at: *aubizniz@idg.co.uk*

Composition



£169.95 inc VAT (P&P free)

Special offer price of £85 for ProArtisan 24 owners

Introductory offer - £99.95 for users of other art packages

CLARES
MICRO SUPPLIES

Access
VISA

98 MIDDLEWICH ROAD, RUDHEATH, NORTHWICH, CHESHIRE CW9 7DA
TEL: 01606 48511 FAX: 01606 48512 email: sales@clares.demon.co.uk

RISC PC EXCLUSIVE

Hilighter

Sherston Software

Hilighter is a simple but powerful program that allows you to present pages of text and graphical information and then link them together in any way you like. The software from the entire package is on this month's *Acorn User* disk 2, compressed using ArcFS.

The minimum system requirements are 1Mb RAM and RISC OS 2. This free copy comes with a short tour through the software features and three example files.

To install the software:

• **For pre-Risc PC machines**: If you do not already have a *!Fonts* directory just copy the one provided to the root directory of your hard disc. If you do have one you can still just copy across and the provided fonts will be added to your existing ones, you will have to double-click on the *!Fonts* on the hard disc in order to make the new fonts available.

• **For Risc PC**: Double-click on *!Boot* to load the Configuration program, click on the Fonts icon, drag the Hilighter *!Fonts* icon on to the drop zone at the bottom of the Fonts dialogue box.

• Create a suitable directory for the Hilighter application and drag the *!Hilighter* icon from the disc to the new directory.



How to use it

This is a brief description of how to use the software, if you want a printed manual and the other important documentation these are available from Sherston Software for just £4 including p&p (address at end).

To run the program just double-click on the *!Hilighter* application icon. The program uses "folders" to store its work details for each project so to start a new one click on the *!Hilighter* icon. A window appears allowing you to drag a new folder — you can change the name, up to 9 characters — to wherever you prefer. The program then opens up at page one.

Existing *!Hilighter* folders can be loaded in the usual way either by double-clicking or by dragging to the iconbar icon.

You can add drawfiles, sprites and text to a page. The drawfiles and sprites are global resources and can be added to any page without having to be loaded again — use Control+R to display a resource list from which you can add, remove, replace or save out resources. If you replace a resource the image is updated on every page that uses that resource.

Text is individual to each page, it can be dragged in from outside or entered on the page itself. Font style, size and colour can be changed.

Hilighter pages are also displayed as resources, dragging a page from the resource list to the current page makes that one the new current page.

Linking pages

Once you have your text and graphics on a page you can link it to other pages in the folder. Links are set up using one of the nine hilighter colours available in the toolbox to paint over the area to be linked.

Highlights may only be painted on to the page when the *Display highlights* option is on, this is in the main menu **Display** sub-menu. The Tab key can be used to toggle the option on and off.

To highlight an area follow these steps:

• Choose the nib size you want to use — there are two available from the toolbox.

• Click on the colour you want to use.

• Move the pointer into the page area — it will change to a hilighter icon with a nib the same colour as the one selected.

• Drag the nib across the area you want to highlight.

In this way you can highlight any area you want, large or small, regular or irregular. If you make a mistake and you wish to remove some highlights simply select the eraser from the toolbox and use it to remove the highlight, or a part of it.

To make sure a regular area has straight lines you can hold down the Shift key as you start to drag the highlighter pen. This also works with the eraser. You can remove all the highlights from a page using the menu option in the **Page** sub-menu.

Once you've placed a highlight colour on a page you can use it to link to another page, as there are nine colours you can link with up to nine other pages. The current page can be linked to an existing page or to a new page, which will be created automatically.

Select the browser arrow from the bottom of the toolbox, as you move the pointer into the page it changes to a pointing hand. Move the finger over a highlighted area and click Select. A window pops up asking for the name of the page you want to link to, enter the page name.

If the page exists the link will be set up and that page is loaded as the current page. If the page doesn't exist the link is made and the new page created then loaded.

That should be enough to get you started.

Hilighter Manuals are available from:
Sherston Software Limited
Angel House
Sherston
Near Malmesbury
Wiltshire
SN16 0LH
Tel: 01666 840433
Fax: 01666 840048
Email: sales@sherston.co.uk
Internet: http://www.sherston.com/
AOL Keyword: SHERSTON

Regular items

• Mike Cook's !PUPe plus extras from his Q&A column

• Steve Mumford's Wimp C series creates a simple database application

• David Matthewman's HTML page examples

Cover disc

Save the Gweeks

Charles Dell

A long time ago, in a galaxy far, far away...

The great Gweek empire once sprawled across a hundred worlds and in this great empire the gweeks lived prosperously and peacefully, happy in the knowledge that they were having it pretty good.

But alas, all good things must come to an end — and the end had a face, a cruel twisted horribly deformed, spotty unshaven face, with an improbably large nose. The face of the Snerds.

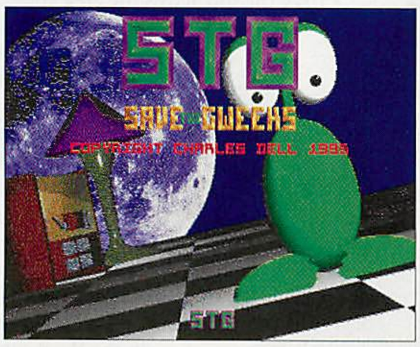
This vile race swept across the Gweek empire destroying all before them. Outnumbered and out-gunned the Gweeks retreated to their home world of Gweekon. Now the only one being stands between the Gweeks and total extinction, and that being is you.

Utilising the latest in spherical highly durable fighters (a ball) you must defend the Gweeks across many varied areas of their home world by eradicating the snerd aggressors.

Good luck, Commander, and may the Force be with you.

Game Controls

Mouse	Crosshairs and pointer
Select	Thrust towards crosshairs and choose with pointer
Adjust	Fires cannon at crosshairs
H	Hyperspace
B	Smart bomb
S	Shield
M	Homing missiles
E	Energy recharge
Escape	Return to title screen
P	Toggle pause
F1	Mute internal speaker
F2	Activate internal speaker
F3	Pause intro tune
F4	Unpause intro tune











Disc information

The software on these discs has been compressed using *ArcFS 2* from VTi, and are opened by running a copy of *ArcFS* then double-clicking on the archive to open it. There is a copy of *ArcFS* on each disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.



Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.* If it verifies successfully return it to the *Acorn User* editorial office at the usual address.

The *Acorn User* cover disc has been checked for viruses using *Killer* version 2.204 from Pineapple Software.

FEATURE

The big mark-up

This issue, David Matthewman shows you how to do general mark-up on HTML files

In the past three issues, we've not really met a wide variety of tags. We've looked in detail at the anchor and image tags (<**a**> and <**img**>), and touched on some of the other html tags such as <**head**>, <**body**> and <**p**> which are needed to write any HTML at all. However, the time has come to introduce all the other tags you'll need when writing HTML.

These are all described in the HTML 2.0 standard published by the World Wide Web consortium. Other, non-standard tags (and the Form elements of the 2.0 standard) will be described later.

Tag meaning

The bulk of the HTML tags I'm about to describe are known as 'semantic' tags. They give some extra meaning to the text they enclose, or put it into some wider context. Examples of this include emphasised text, various levels of headings or variable names. In all cases, the tags tell you something extra about the text that helps you to understand it, or to see how it fits in with the rest of the page.

The most basic of these tags has been mentioned earlier in the series – the paragraph tag pair <**p**></**p**>. This breaks up HTML text into paragraphs – remember that line breaks are usually ignored in HTML – and is the tag that should be applied to text that has no 'deeper' meaning. It's so common that it is usually used without the closing </**p**> tag; in fact, all HTML editors on the Acorn only insert the opening <**p**> tag.

Because the </**p**> tag is so often omitted, the paragraph tag can look like a paragraph *separator*, similar to a Return character in a word processor. It isn't – it's a style which applies to the text following it as far as the next tag with a similar status such as a heading or another paragraph. This rarely makes any practical difference to the appearance of your HTML, but it's worth remembering. For example, you *should* put a <**p**> tag after an HTML heading, even though a line break would be inserted by the browser anyway, because otherwise the following text isn't officially paragraph text.

If you want a true line break, use the <**br**> tag. This is an entity in its own right and means 'insert a line break here'. It's useful for forcing the formatting of addresses, for instance, and shouldn't be overused. The <**hr**> tag is another separator – it inserts a horizontal rule.

Headings

Another easy set of tags to understand are the heading tags. These come numbered from <**h1**></**h1**> to <**h6**></**h6**> to represent headings of successively lower importance. The title of a page is usually a level one heading, and uses <**h1**></**h1**>, with subheadings using <**h2**></**h2**> and so on (not many pages get down to using <**h6**></**h6**> in practice).

It's important when writing HTML for use on the Internet to use headings in order and not to skip out a level, and it's good stylistic practice anyway. Your HTML will look more organised, and will probably be easier to write.

The other important fact to remember about headings is that you, the HTML author, don't have any control over how browsers will render the text in a heading. Most browsers (including the Acorn ones) allow the user to re-configure the fonts, sizes and weights used, so there's simply no point in the HTML author trying to fix this. It's a hard lesson for someone DTP-trained to learn, I know, but the best thing to do is to look at some of your HTML on a number of different browsers, and you'll quickly see that the sort of control you're after isn't possible at the moment.

Other block elements

Aside from headings and paragraphs, there are a few other formatting options that may be applied to blocks of text.

These are the <**pre**></**pre**> tag pair for pre-formatted text, the <**blockquote**> </**blockquote**> tag pair for block quotations from another source and the <**address**></**address**> tag pair for addresses.

The address and blockquote tag pairs are clear examples of 'semantic' tags that give you some 'extra' meaning about the text that they enclose: that it is respectively an address and a quotation. They say nothing about how the browser should indicate such information. Although most browsers indent blockquotes and italicise addresses, they could just as easily use quotation marks and an address book icon; whatever they felt best conveyed the information.

The pre-formatted text tag pair is something of an oddity in that it *does* tell the browser how the text should be displayed. In fact, it tells the browser to display the text in a monospaced font (such as Corpus) with all spacing and line breaks intact, if possible. This is the *only* place in HTML where line breaks are preserved. This tag is extremely useful for displaying tables of data and ensuring that the columns all line up (there is a better way, but it's not much supported on the Acorn

at the moment, and isn't in the HTML 2.0 standard).

Lists

HTML supports ordered (numbered), unordered (bulleted) and definition lists. The first two use a bracketing tag pair to enclose the list – **
** for ordered lists and **
** for unordered ones – with the individual list elements being separated by **<li>** tags.

Definition lists or glossaries are bracketed by a **<dl></dl>** tag pair. The individual elements in the glossary come in pairs: a term and a definition of the term, denoted by **<dt>** and **<dd>** respectively.

Lists can be nested. You can have any of these types of list within any other type, and go down several levels, but always remember to 'end' each list you start. Browsers usually indent lists so if, at the end of a complicated sequence of lists, you find your text is being indented unexpectedly, you've got the nesting wrong.

The best way to get the hang of lists is to look at some examples. There are some example lists on the cover disc, and the example HTML that comes with *ArcWeb* (on the recent CD-ROM) has some fine examples of nested lists.

Character markup

The tags encountered so far tend to mark off sentences or paragraphs. However, there are a number of tags which apply to individual words, phrases or (less usually) characters. These split cleanly into two types: 'semantic' and 'physical'.

The semantic tag pairs are as follows:

- Citations **<cite></cite>**
- Code **<code></code>**
- Emphasis ****
- Keyboard entry **<kbd></kbd>**
- Sample text **<samp></samp>**
- Strong emphasis ****
- Variable names **<var></var>**

The physical tag pairs are the following:

- Bold ****
- Italic **<i></i>**
- Typewriter (monospaced) font **<tt></tt>**

Hopefully the difference between the two types will be apparent. The semantic tags add meaning to the text, while the physical ones say what it should look like.

Which is more useful? Anyone used to DTP work will usually suggest the physical ones, but that's just because there's no such thing as a semantic tag in traditional DTP. Consider the sentence:

'The book *C for Smart People* explains how to use *#include* in a clear manner – *far* better than the opposition.'

Typographically, this is simply three italicised words or phrases. However, they're all italicised for different reasons: '*C for Smart People*' is a citation, '*#include*' is an item of computer code, and '*far*' is an emphasised word. In HTML you could either write the above as:

```
The book <cite>C for Smart
People</cite> explains how to use
<code>#include</code> in a clear man-
ner - <em>far</em> better than the
opposition.
```

or as:

```
The book <i>C for Smart People</i>
explains how to use <i>#include</i>
in a clear manner - <i>far</i> better
than the opposition.
```

I hope it's obvious that the former gives you much more information about the meaning of the sentence.

'Physical' tags should therefore only be used when it is absolutely vital that the text be displayed bold, italic or monospaced. In other words, almost never. They certainly *shouldn't* be used to try to alter the appearance of headings (as they sometimes are); this simply will not work in most cases.

You can nest character markup tags legally in HTML, but there's no guarantee that the browser will nest them when displaying them. For instance:

```
This is <b>bold</b>, <i>italic</i>
and <b><i>bold-italic</i></b>
```

may display as:
This is **bold**, *italic* and ***bold italic***
or as:
This is **bold**, *italic* and **bold italic**
or even:
This is **bold**, *italic* and *bold italic*
(similarly for semantic tags). Tag pairs should never overlap, so:

```
<b>bold, <i>bold-italic</b> and
italic</i>
```

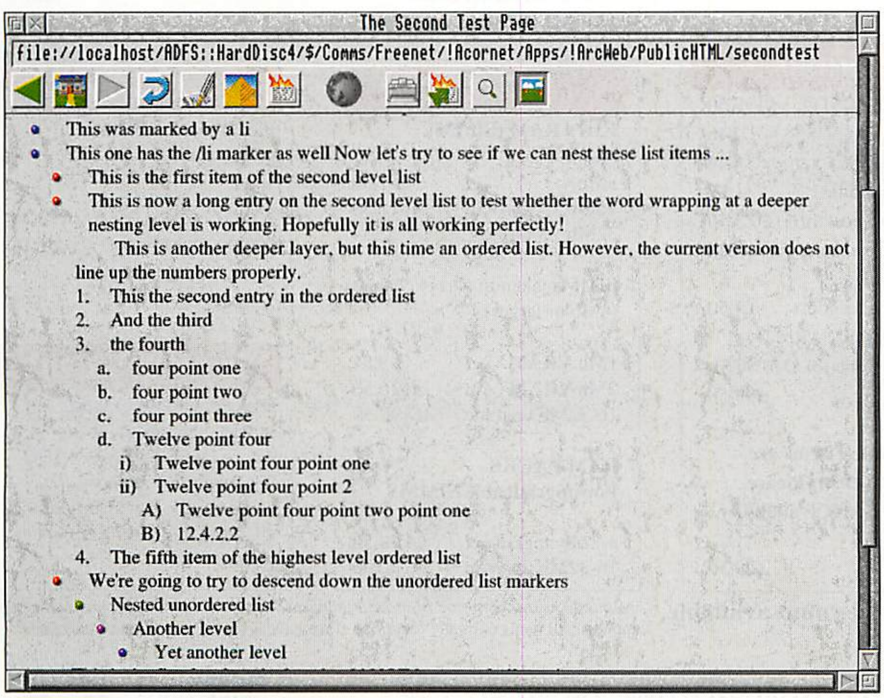
is clearly wrong, because the bold and italic tag pairs overlap instead of one being enclosed completely within the other.

That's all folks

Surprisingly enough, that's about it for strict HTML markup. There are a few more tags associated with the header in an HTML file (which aren't important at this level) and with forms (which are another subject entirely) but you now know all you need to know to mark up some fairly complex pages. Aside from the multitude of tags that I introduced this issue, you also know how to insert images (the **<img>** tag, last issue), link to other pages (the **<a>** tag in August) and properly top and tail your document (the July issue).

The full list of tags discussed here is in a file *tags/htm* on the cover disc, just so that you can get an idea what they look like in your browser. There's also a file *chars/htm* which has a list of all the extra characters (such as accents) that you can insert into your HTML using control codes.

Next issue, I'll start going beyond the strict HTML standard, and looking at some of the 'unofficial' tags and attributes that you can use to change the look of your pages, should you so wish. Until then, get some practice in with the tags you know about so far. There really aren't that many to learn, and writing 'raw' HTML is actually surprisingly easy.



Lists can be nested, as this file shows

A3000 upgrades

Memory

1-4Mb	£104.50
1-2Mb	£46
(See also the "2nd user" section)	
1-2Mb (upgradable to 4Mb)	£56
2-4Mb upgrade pack	£84.50
4-8Mb	£229

The above upgrades are all constructed on four-layer boards, as recommended by Acorn. Gold plated connectors are used for reliable contact with the A3000 main board. There are no clips or wires, and no soldering is required (except 8Mb upgrade). Some older types of 2Mb board cannot be upgraded to 4Mb, but we offer a trade-in allowance. Please phone for details.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. Also suitable for the A3010.

80Mb	£175
120Mb	£217.50
170Mb	£241
240Mb	£270
RISC OS 3	£46

A3010 upgrades

Memory

1-4Mb	£116.50
1-2Mb	£44.50
2-4Mb	£93

The 4Mb upgrade is constructed on a compact four-layer board. No soldering is required.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. For prices, refer to the A3000 section.

A310 upgrades

Memory

1-2Mb	£81
1-4Mb	£116.50

All our A310 memory upgrades are constructed using four-layer circuit boards. There is no other 300 series RAM upgrade which has been available for as long as this one, and which has the same reputation for quality and reliability. A fitting service,is available.

4-8Mb	£229

Hard drives

A range of internal hard disc upgrades is available. Prices below are for complete systems, including metalwork, controller card and cables as appropriate. No specialist knowledge is required either for installation or use. A backplane is normally required in order to fit a hard drive.

IDE

850Mb	£252.50
1Gb	£282

SCSI

540Mb	£252.50
1Gb	£333.50
Backplane (4-slot, four-layer)	£57.50
Fan for above	£9.50
RISC OS 3	£46
RISC OS carrier board	£20
MEMC1a	£46

16Mb SIMM £116.50

A3000 4Mb RAM £104.50

A5000

Memory

2-4Mb	£81
4-8Mb	£229

Dealer fitting for the 8Mb upgrade is recommended for the 25MHz A5000.

A3020/A4000

Memory

2-4Mb	£87

Hard drives

80Mb	£113
120Mb	£155
140Mb	£173

A400/1

Memory

Per Mb (up to 4Mb)	£44.50
4-8Mb	£229
RISC OS 3	£46

Hard drives. For prices, refer to the A310 section.

Prices include VAT @ 17.5%

How to order: Cheques made payable to IFEL. Most Credit cards accepted, and Switch. Official orders welcome.

Various

Alsystems SCSI 2	£199.50
RISC OS 3	£46
MEMC1a	£46
Hard disc cradle	£7
Fan filters (pack of 5)	£3.50
RISC OS manuals, no vat	£22
Dongle dangle	£7
Chip extractor tool (for eg MEMC, ARM2)	£4.50
CDFS upgrade for Oak SCSI card	£29.50

The following items are reduced to clear. Please phone to check availability.

Wordworks	£29.56

RISC PC

Extra RAM (SIMM)

4Mb	£27
8Mb	£57.50
16Mb	£111.50
32Mb	£234

SIMMs taken in part exchange (4Mb or larger).

1Mb VRAM	£81
2Mb VRAM	£116.50
16-32Mb upgrade	£198.50

RAM PACKS
For upgradeable SIMMS

4-8Mb upgrade	£70.50
16-32Mb upgrade	£200

2nd User

Please phone to check availability.

A3000 1-2Mb	£23.50
A3000 RAM board (ie bare board, no chips)	£6
A5000 2-4Mb	£68

Spares/Repairs

We carry stocks of most replacement chips for the Acorn range. (MEMC, VIDC, IOC and most memory devices). We can also fit any upgrades and offer a computer repair service.

Educational and quantity discount available.
Dealer enquiries welcome.

All products (except some from the "2nd User" section) are fully guaranteed for 12 months. All items normally carried in stock have a 14-day money-back guarantee.

IFEL

21 Glenfield Road, Glenholt, Plymouth PL6 7LL. Tel (01752) 777106. *Fax (01752) 777830*

PRICES INCLUDE VAT

VISA

FEATURE

Acorn Interviews

We thought you ought to know what was going on at Acorn, so we asked two senior staff just what was happening. First of all we tackled Peter Bondar, driving force behind the Risc PC and now Director of Acorn Risc Technologies (ART):

AU: *How has the re-orientation of Acorn's aims changed things for ART?*

PB: When ART was created one year ago it was not clear about the strategic direction for Acorn as a group. It can now been seen that ART is absolutely central to the objectives and direction of Acorn as a design and licensing organisation spanning many application and technology areas from the network computer initiative through the set-top box digital interactive TV area, to the plethora of applications areas that ART is involved in.

AU: *Would you say ART are doing better or worse than a year ago?*

PB: Virtually every aspect of ART's business is far better than we expected. Our product related business is significantly up year-on-year. Most of the ART Centres of Technology are selling substantially more product than a year ago and confidence in the Acorn technologies is higher than it has been for a long time.

The technology business is also doing well. For commercial reasons it is not necessarily obvious who we are working with but our reputation in a year has spread far and wide and our sales team is inundated with requests for information on our technology.

AU: *Many Acorn enthusiasts are worried about the future of RISC OS and the Risc PC, can you reassure them?*

PB: RISC OS continues to be at the core of all of Acorn Computer Group's activities for the foreseeable future. We have sold RISC OS to many organisations in Japan, Korea and the States and a number of major product announcements will be made by companies in these countries in the next few months that will be based on RISC OS.

RISC OS is at the heart of the Acorn Network Computer which is the main product that Oracle are promoting in the vanguard of the network computer initiative.

The Risc PC and its direct technological derivatives, that is the A7000, the set-top box and the network computer, have all attracted significant attention and have been sold as either products or technologies in significant numbers so we are now able to reinvest into the fundamental technologies.

Therefore ART will be producing new versions of Risc PCs with enhanced functionality during 1997/98. It's clear that our product business will not depose Microsoft or even Apple but there is no reason, given our new business methodology, why we will not carry on making products on a long term basis.

AU: *What would be the advantages of a PPCP-based Risc PC?*

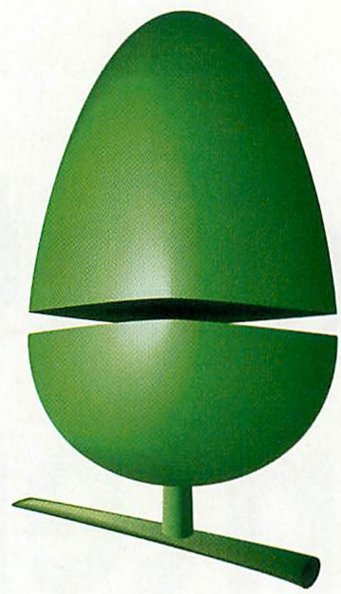
PB: The advantages are largely in the availability to run other operating systems such as, Windows NT, Mac OS, Solaris AIX. The ability to plug in PCI-based peripherals, such as high performance graphic cards, digitisers and other things of that type and the availability of potentially even faster Risc PCs that can be build using our traditional technology.

This balanced against a higher cost. It is likely that we will be building both PPCP-based Risc PCs, as well as Risc PCs based on a future, revised IOMD VIDC 20.

AU: *What has happened to the use of Taos with their multi-threaded, multi-processor operating system?*

PB: ART can confirm that it is has had a number technological meetings with Taos. We have common business interests now in a number of areas which cannot be dis-


Peter Bondar



closed for commercial reasons and it is still believed that the use of Taos and ARM-based technologies may well come together in a commercial product in the 97/98 timeframe. We are not at liberty for commercial reasons to discuss this in more detail but it can be said that many people within ART feel that the use of Taos and RISC OS on a multi-processor ARM-based platform would be a very compelling product!

AU: *Now that you do design work for other companies does that mean any Risc PC advances are limited to what other people want?*

PB: Not at all. The work that we do with other companies means that the additional functionality created as a result of that work may well be transferred into a Risc PC.

In addition we are speculatively investing engineering time and effort into Risc PC for our enthusiasts and VAR customers. Therefore Risc PC will benefit from both its own private "investment" by the product division and also from benefits gained through work with our other partners.

AU: *Do you feel that the separation of the education business has been a good thing?*

PB: From an ART perspective undoubtedly the fact that we can build products that have high technology and do not have to meet the very specific requirements of education has allowed us to be more creative and more innovative than historically.

From a commercial viewpoint, ART wishes that educational customers still buy ARM-based RISC OS based products for the foreseeable future. We are therefore still committed to servicing those customers through Xemplar. In addition because we are now ourselves focussed on the enthusiast and VAR market, we can develop far more creative and innovative products that are more accurately targeted at the requirements of those people.

AU: *Can you say where most of the business for ART is coming from at the moment?*

PB: Today the majority of our business in revenue terms comes from our product related business. This is both as planned and because of the fact that the product business has over-achieved against our expectations. The ratio of revenue from products compared to technology is higher than planned but simply through the over-achievement of the product based business. The technology business has a long lead time before revenues appear — typically 12 months to 3 years, so it would be unrealistic to expect substantial income from the technology business for the near future. However the rate at which new contracts are being won indicates that the revenue and profitability of the technology business will dramatically increase over time.

AU: *What do you think your business will look like in 12 months time?*

PB: We anticipate that our technology business will have grown dramatically by a factor of two to four times and that our product business will probably be of a similar volume to this year's, which is more than 60% above our original hopes and plans.

AU: *How do you think things will go for Acorn in future?*

PB: For all employees of Acorn today, the world is an infinitely brighter place than it was a year ago. The commitment of Oracle to Acorn for the Network Computer is greater now than it was when it first started and Oracle can see the dramatic benefits in features, function and performance that we have brought to the network computer initiative.

The digital interactive TV business is a long term business which, even so, has the possibility of substantial wins in the next 2 to 3 years. For ART the future looks very bright. We have doubled in size within a year. We currently have another 19 vacancies to recruit people externally, including a significant number of software and hardware engineers and currently our order book is full until the middle of next year.

We plan to invest in our product technologies and the number of the clients that we are involved in today, will allow us to create new products for our product based business during 97/98!

I personally have been very pleased to be involved with ART through this initial period and I know that my colleagues and myself look forward to the next year with excitement and anticipation and with a feeling of confidence and security that has not been felt within Acorn for many years!

We then spoke to David Lowdell, Manager for Product Engineering, about the Network Computer project:

AU: *The NC has stolen a march on the STB what do you put that down to?*

DL: I would agree that the Network Computer has come to prominence recently and tended to overshadow the set-top box. However, the set-top box has not gone away and Online Media are continuing to build their alliances and have the possibility of supplying large numbers of set-top boxes around the world.

Nevertheless, the reason that the Network Computer has come to the fore recently is because narrowband communications are much more prevalent than broadband. The Internet is a worldwide phenomenon which offers unrivalled connectivity and content and as a consequence the investment needed to provide a narrow band service is much less than a broadband one.

There is also the whole concept of the corporate intranet which offers the Network Computer a huge opportunity for sales growth as it extends the market for computing power inside small businesses and supplants the PC in those areas where the PC is over specified for the tasks for which it is being used. However, this situation is only a temporary one and probably in less than ten years high bandwidth services will be pervasive and the Network Computer will basically be a set-top box.

AU: *Can you explain what the NC "Reference Profile" and "Reference Design" are and how they differ?*

DL: The Network Computer Reference Profile was introduced on 20th May 1996 by Apple, IBM, Netscape, Oracle and Sun. It is a set of guidelines, in particular indi-

cations of which standards should be supported, intended to promote and facilitate the widespread introduction and take up of Network Computer concepts, for example, to facilitate interoperability, broad application base, ease of end-user use, simple and unified system administration, low cost of ownership, and so on.

The Network Computer Reference Profile is intended to provide a common denominator across a broad range of network computing devices including personal computers. The specifications in the Network Computer Reference Profile are intended to be open standards which anyone can implement. It also provides guidelines to content and service providers in creating Internet content and services compatible with Network Computer Reference Profile compliant devices.

Examples of the types of standards that the Network Computer Reference Profile includes are TCP/IP, DNS, HTTP, HTML and Java. It also gives some minimum guidelines on the type of device resources compliant devices must have, for example a minimum screen size of 640x480 and some form of text input capability are required.

NC Inc.'s (Oracle's NC company) Network Computer Reference Designs, on the other hand, are specific implementations of Network Computer devices. NC Inc. has contracted Acorn to develop several reference designs and which it then licenses to many large volume manufacturers. The benefit to manufacturers in using these reference designs is that it minimises their time to market and their development costs. Acorn has been able to create these reference designs very rapidly for NC Inc by drawing on the highly relevant technology that it has developed over a period of many years.

AU: *What are the advantages of NCs based on Acorn technology?*

DL: Network Computer reference designs based on Acorn technology have a number of advantages compared with network computers which are likely to be based on other current technologies. The ARM technology is low cost, has a low power consumption and small in size. This makes it ideal for producing low cost, compact and yet powerful computing products.

The fact that RISC OS has always been ROM-based means that it is ideal for use in Network Computers which do not have local storage capabilities. In addition, our history of working with low grade television monitors and our outline font technology mean that we are able to produce computer generated TV pictures which are second to none. This is a very important consideration as many of the Network Computers will be sold into the consumer market and therefore be used with televisions.

AU: *Apart from NChannel who are part-owned by Acorn anyway, is there much interest in building NCs based on Acorn technology?*

DL: As time passes, we are becoming increasingly involved in supporting the NC Inc. licensees who will be manufacturing and distributing the Network Computer. Our role is to enable the licensees to become familiar with the technology of the reference design prior to putting in into production.

We are, therefore, dealing with a growing number of large corporations who operate on a global scale. As a result, I can confirm that there a currently a number of significant companies that are gearing up to manufacture the Network Computer in the very near future and that NC Inc. are actively working to increase the number of licensees of the Network Computer.

AU: *Do you think there's an opportunity for Net-based Acorn third parties in the NC scheme of things?*

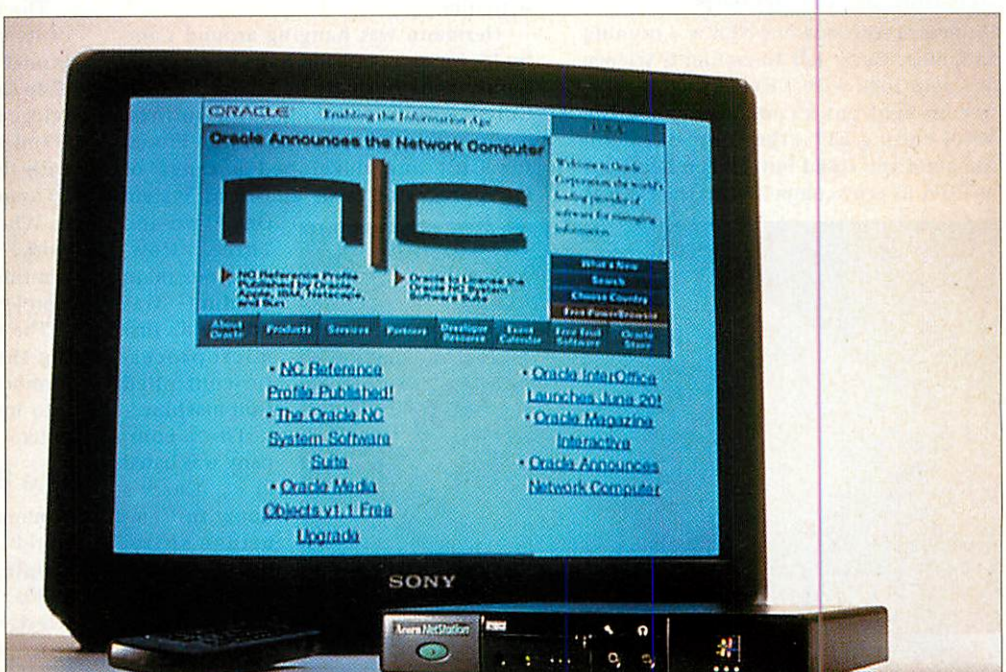
DL: The current Network Computer reference design contains at least four significant elements, both hardware and software, which have been designed and developed by Acorn third parties, some of whom specialise in producing networking products. Therefore, I believe that there are considerable opportunities for companies in the Acorn community to prosper from the Network Computer. Indeed, the opportunities for our third parties to prosper are not limited to the Network Computer but extend into the other initiatives in which the various parts of Acorn are now engaged.

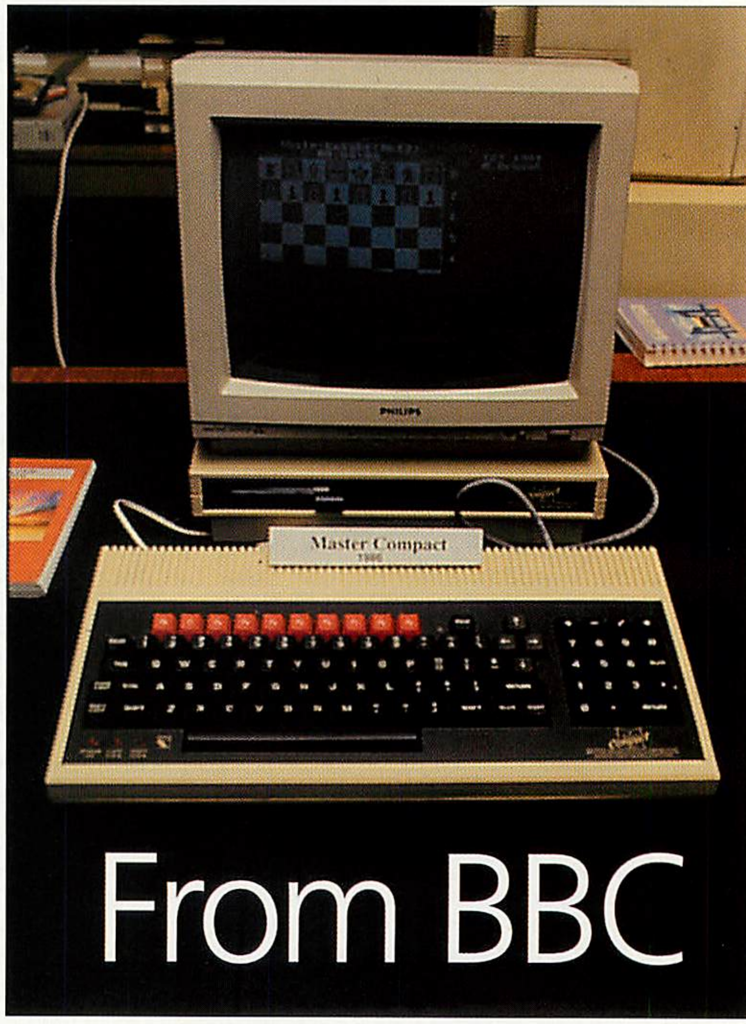
AU: *How do you think things will go for Acorn in future?*

DL: I believe Acorn has a bright future. For years our technology has not received the recognition it deserves. The relationship with NC Inc. now means that Acorn's technology will be used by millions of people across the world. The relationship with NC Inc. also means that we will be able to invest in our technology to ensure that it maintains its lead in those areas where it has advantages.

In addition to the benefits that flow from the relationship with NC Inc, there are also interesting developments happening in both ART and Xemplar. Taken all together, these are the reasons why I believe that Acorn's future is very promising. AU

NetStation





From BBC

Hermann Hauser seems to own portions of every high-technology company in the country, and he's certainly richer than I am. Yet he started off his career with the formation of what was then a little company, with former Sinclair business partner, Chris Curry. That company is Europe's only designer of personal computers – Acorn.

Christopher Curry

Born in 1946 in Cambridge, Christopher Curry was educated at Kimbolton, a public school in Cambridgeshire. At 18, he went to do a diploma in technology but didn't finish it. 'I got into a number of scrapes,' he recalls, 'and decided it was better to move back to Cambridge.' He worked at a number of places before noticing an advertisement in the paper. It was a job for Sinclair Radionics.

'I had already built two of Clive Sinclair's kit products, and that interested me in the vacancy. I went to the interview with a friend and Clive gave us both the job on the spot.'

Curry worked there from 1964 until 1977, during which time the company invented the world's first pocket calculator, which was an astounding success. However, due to high labour costs and reliability problems (some models were known for catching fire), Japanese companies such as Casio took the market. This and other factors placed Radionics in financial difficulties.

The government's National Enterprise Board (NEB) saw the importance of a British calculator manufacturer and bought a majority shareholding in the company.

Science of Cambridge

Displeased with how the NEB was running Radionics, Curry left to co-found Science of Cambridge with Clive. Curry recalls, 'We brought out a computer called the MK14 costing £39 – the cheapest microcomputer you could buy.' When launched in 1977, its only competitor in the UK was the Nascom, a machine which was much more expensive. Nearly 30,000 MK14s were sold, despite having to be programmed in hexadecimal. A small version of BASIC was eventually produced for it, along with a tape interface and a video output.

But not everything was rosy at Science of Cambridge. Curry remembers, 'We had a number of arguments about whether we should do the MK14.

'However, when it was finished and such a success, Clive decided to build his own computer inside Radionics.' Clearly, that would make them competitors, with Clive having access to all Science of Cambridge's technology, so Curry had to build his computers elsewhere.

Cambridge Processor Unit

Curry was drowning his sorrows in a Cambridge bar, pondering over the question of what to do next, when a young Cambridge graduate started a conversation with him.

'Hermann was hanging around Cambridge for an excuse not to go home to the family wine business in Vienna,' recalls Curry, who was looking for a business partner. 'So we formed Cambridge Processor Unit and developed a range of microprocessor cards known as System One, Two and Three. However, our main product was the world's first microprocessor-controlled fruit machine.'



The company was based at Curry's house in Cambridge-shire, before moving to Market Hill where Acorn was formed. Hauser and Curry decided that Acorn was a better brand name for the then new product, the Atom.

The machine was hailed as years ahead of its time, partly because of its built-in Econet networking system, designed by a chap called Nick Toop, who is now a Cambridge lecturer.

Indeed, Hermann Hauser was so pleased with the Atom that he invited Bill Gates, co-founder of Microsoft, to come and see it. When he did, he asked, 'What's a network?' There was some talk of Bill Gates wanting to licence an operating system for a project he was working on.

The microcomputer business was growing then, and Acorn sold quite a large number of Atoms, but everything paled into insignificance against the BBC computer.

The BBC deal

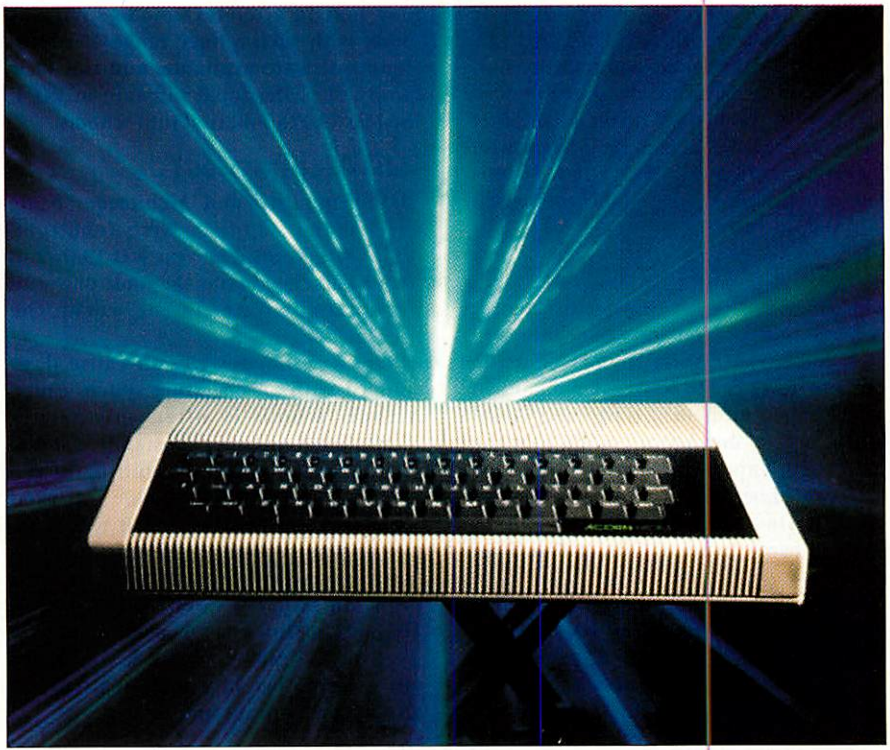
'Computers!? They're going to destroy the world!' That, apparently, was what many people thought at the beginning of the 1980s. So the BBC decided to produce a television series aimed at dissolving computer-phobia. However, it needed to find a suitable company to make the computers and license the BBC's brand name. Three

companies came to the fore – Newbury, Sinclair Computers (Clive had by that time left Radionics) and Acorn.

The BBC was being directed in its technical requirements by John Coll, who was the head of computing at Oundle School. He was convinced that the BBC should use a machine that ran the CP/M operating system as used at Oundle. However, Acorn's Proton prototype, which had taken four days to develop, couldn't run CP/M.

Acorn had a major hurdle in convincing the BBC that what it was doing was better. After all, Acorn's operating system was ROM-based (rather than disc-based), and Acorn's BASIC programming language was fully structured. The machine was perfect for the BBC except that it wasn't 'industry standard compatible'. To get around this, the Proton was given an expansion socket called the Tube, which allowed a CP/M-compatible Z80 co-processor to be slotted in (*à la* Risc PC).

Eventually, the BBC was persuaded that products from Sinclair and Newbury weren't real competition, and Acorn's BBC Micro was given the go ahead. Interestingly enough, John Coll came to work for Acorn shortly afterwards, apparently saying, 'Well, I didn't think you were the right choice, but now you've won, I might as well come where things are happening.'



to Oracle

Acorn's future as the leader in Network Computers is almost certain, but who are its founders and why is it where it is today? Alex Singleton finds the answers

The following years were booming. If you wanted a computer, it had to be a BBC Micro or Sinclair. Market researchers had predicted that around 2,000 BBC machines would be sold; the real figure was over two million. Major products were released for the computer, including the desktop publishing package, *AMX PageMaker*, and word processing packages such as *WordWise* and *View*.

In hindsight, it seems most peculiar that the two most popular word processors for the BBC came from former pupils of Oundle School – Charles Moir (Computer Concepts) and Mark Colton. And no history of the Acorn Group would be complete without mentioning *Elite*, the space game that caused more than a few people to go without sleep.

Acorn had the biggest customer services department of any computer company, according to Curry, 'We had dozens and dozens of people answering phone calls. Some of those who phoned had got stuck running a program on their ZX81 and wanted us to help them because other companies didn't provide the same level of service.' Curry and Hauser believed that one of the ways to cut this down was by the means of a magazine. That magazine is the one you're reading now.

Trouble ahead

However, for Acorn, trouble was ahead. Shortly after the launch of the BBC, IBM brought out its PC, which was no more powerful than a BBC Micro, yet dramatically more expensive and poorly designed. 'We thought the IBM PC was a pile of junk,' recalls Andy Hopper, one of Acorn's then Directors. 'We didn't think it would be as successful – and it had *no* right to be as successful – as it was.'

Curry explains, 'We were failing to break into markets outside the UK. We had spent a huge amount of money trying to get going in America, and had lost the battle. The reason was that Microsoft was becoming the standard – computers that couldn't run DOS couldn't sell. So my view was that we should be into machines that didn't require a DOS. Nowadays these are called Network Computers.'

Attacking other markets

By the middle of 1984, most schools had purchased a full quota of BBC Micros, and sales of the Electron into homes were poor.

Acorn, therefore, was looking at alternative markets. The one it chose to enter was the office, and launched the Acorn Business Computer (ABC) at the 1984 *Personal Computer World* Show. All models were fitted with a BBC-like motherboard containing a Motorola 6502 processor; an Intel 286 or National Semiconductor 32016 second processor board was optional. A switch at the back of the keyboard controlled which processor was being used.

The 286 card wasn't supplied with MS-DOS, but with a mixture of Concurrent DOS and GEM, both from Digital Research. Concurrent DOS was so called because it allowed up to four programs to run at the same time, and this facility was available to the ABC's graphical interface, GEM. However, while the ABC was technically superior over any PC clone, it was ugly and expensive.

With a 10Mb hard disc and 286 card, the machine cost the princely sum of £3,999 + VAT – hardly inspiring. Microsoft

was the magic word by then, and while the ABC would run the likes of Lotus 123, GEM just didn't *sound* compatible. But, with GEM, the machine can probably take its place in the history books as the first world's first personal computer to have an operating system that both offered icons and multi-tasked (the Macintosh then only did the former).

Financial difficulties

Christmas 1984 spelt disaster for Acorn. 'We had arranged for lots of machines to be made,' recalls Andy Hopper, 'but the demand never came. So we were unable to meet of commitments.' Customers could cancel orders, but Acorn couldn't do the same with suppliers. Further problems were caused because, according to one former employee, if Hauser and Curry couldn't agree on something, it didn't get done.

Clearly the company desperately needed some method of reducing its stock. It searched around Europe for a saviour and came across Olivetti. Curry recalls, 'It would sell our surplus stock around the world and, in exchange, own a chunk (around 50 per cent) of the company. That was the deal.

A year later, it hadn't sold a single computer. It couldn't because its sales force had been told only to sell MS-DOS-based equipment. So the relationship with Olivetti was a complete waste of time, and when it took its shareholding up to 85 per cent for some tiny amount, I decided enough was enough and left.'

Stop-gap solutions

Undeniably, Acorn needed an astonishing new product to tempt purchasers away from the likes of Amstrad, Sinclair and, of course, Microsoft.

Hype for the new machine was appearing in the press. Perhaps Acorn would use the graphical user interface it was working on, or a 16 or even 32-bit processor... but when the machine was unveiled, headlines such as 'Acorn anti-climax' appeared. The new computer was merely a model B with double the memory and a disc filing system, suitably called the B+.

Both in Palo Alto (California) and Cambridge, Acorn was developing an operating system for its ARM processor, lead by Hermann Hauser. Known as ARX, it was an 'office automation system'. Yet funding for the project was limited to say the least, and the product never surfaced.

The following year, in 1986, Acorn unveiled the Master 128 and Master Compact, quite possibly the most scorned pair of computers Acorn has ever produced. At a time when most of the industry had moved over to 16-bit technology, Acorn had produced another 8-bit range.

Yet the Master series was fast, had a vast array of expansion ports, and could display text in a teletext mode. What is more, with such a huge range of educational software available, and the *View* family of professional software in ROM, the Master 128 sold well into schools.

Hail Archimedes!

'Hail' being Latin and 'Archimedes' being Greek didn't stop the adverts from combining the words. The year was 1987, and Acorn launched by far the most powerful personal computer in the world, the Archimedes.

The Archimedes was in those days shipped with an operating system called Arthur, which is often mistakenly remembered as being substandard. Sure, it didn't use the full capabilities of the machine (the windowing side was even written in BBC BASIC), but it was superior to what everyone else was doing. It was fast, reliable and easy to use, and even ran Minerva's *System Delta Plus*. This was at the time when PC users who were 'lucky' ran Windows 2, which not only made a bee hive look bug-free but also Rambo appear sophisticated.

Into the future

Today, Acorn is in expansion mode (it's even creating new jobs). Since David Lee was appointed as MD, the company has gone from strength to strength, which is the main reason why Olivetti has sold the majority of its shares. With the Network Computer revolution, the industry's rule book is being re-written.

Peter Bondar, who heads ART, believes that RISC OS will no longer be used just by 'a couple of kids in education', but by a whole range of people who want an alternative to the substandard products coming out of Microsoft.

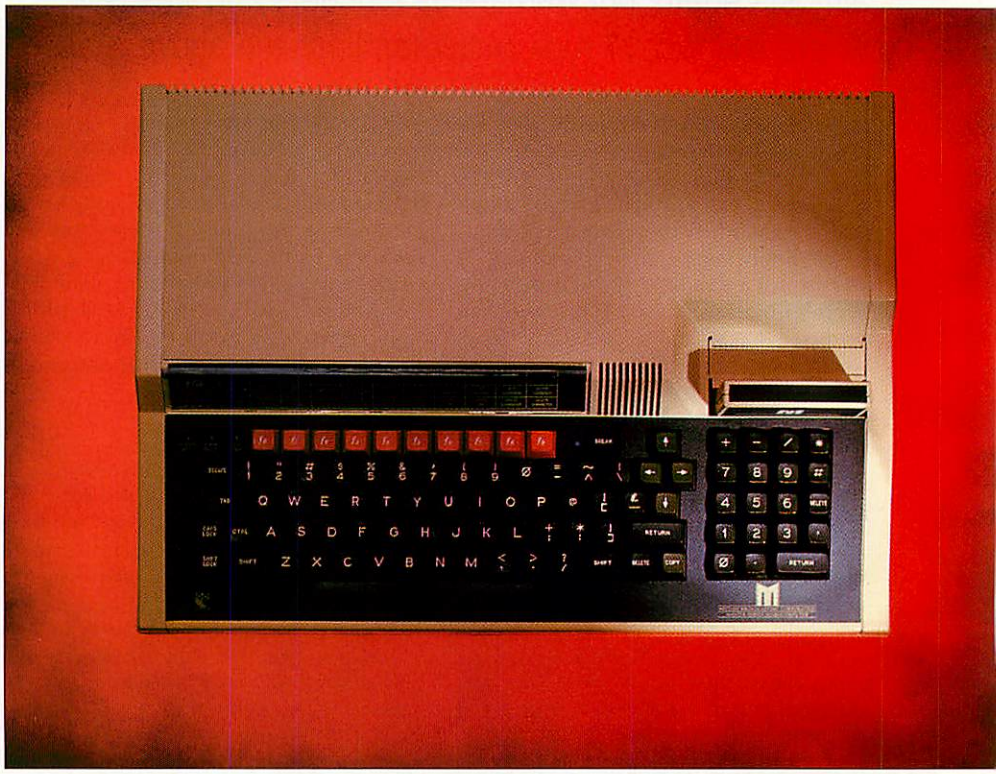
Don't forget, either, that Acorn's present operating system, RISC OS, has some of the best software for it in the whole industry. In fact, it will run more native 32-bit software than Windows 95, Windows NT and OS/2 put together.

And what of Acorn's founders? Hauser is still a director and shareholder of Acorn, and his new business, NChannel, is the sales company behind the NetStation. Hindsight is a powerful tool, and Hauser seems to be using this with NChannel. 'If I had known then what I know now, the world might have been Acorn-compatible instead of IBM-compatible.'

Curry has run General Information Systems (now developing smart cards) ever since he left Acorn, but has some regret about not doing more to unstick Microsoft.

'It does irk slightly when things we were doing ten years ago at Acorn are now being hailed as amazingly innovative... What *will* break the Intel-Microsoft axis is the Network Computer, and Acorn is one of the first at the starting line.'

'In the past,' says Andy Hopper, 'we thought we were doing extremely well, whereas, in fact, we should have been going bigger. Today we *are* playing the world game. Our technology is seen as mainstream to potential licensees, and we're now pictured on an international scale.' AU



Coming to a living room near you

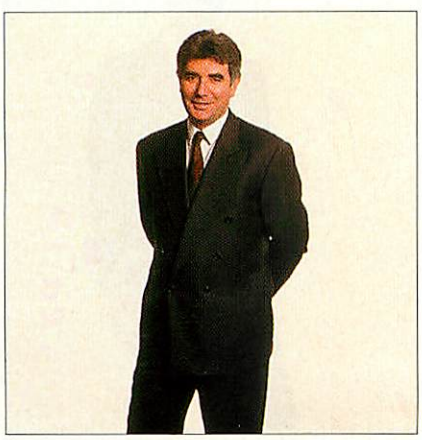
Karen Peach talks to Jamie Minotto from NChannel about their part in the 'living room revolution'

NetStation

In a stock exchange announcement on 11 June 1996 Acorn announced that its subsidiary Acorn Computers Limited had entered into a distribution agreement with NChannel International Limited, a newly formed marketing, sales and distribution company.

NChannel will be responsible for sales, marketing and distribution of the Acorn NetStation over a period of ten years to the consumer market worldwide non-exclusively, and exclusively in the US until the end of 1997. NChannel will focus on establishing the Acorn NetStation as the leader in the emerging market of Network computers.

The agreement with NChannel should reduce the financial risk that Acorn may incur by selling to the general consumer market - an area which obviously requires different techniques and resources. Acorn itself can then concentrate on pursuing its own established channels to the network operator and education markets through Acorn Online Media and Xemplar Education.



Jamie Minotto

NChannel's chairman is Hermann Hauser, one of Acorn's founders and non-executive director, and David Lee, Managing Director of Acorn, is a non-executive director of NChannel.

NChannel's ownership is split in the following way:

- Acorn Computer Group - 44.5 per cent
- Titan Computer Ltd - 20 per cent
- Trust for the employees of NChannel International - 35.5 per cent

The NetStation

Network computing is seen as the fourth wave of computing and Acorn are providing the reference designs for a range of network computer devices for Oracle Corporation. The agreement between Acorn and Oracle allows Acorn to develop these designs and sell them under their own brand names as well as sell the designs to other third parties — subject to the agreement with NChannel itself.

The Acorn NetStation is an Internet box which uses a telephone line to connect to the service provider, a television as the screen and is controlled by a remote control handset. It has no hard drive and is intended to provide a cheap and easy way of accessing the Web, e-mail, word processing applications, games, home shopping, banking and other networked services.

When you buy a NetStation you will get the NetStation box, cables, SmartCard and manuals. There will be optional extras such as an infrared keyboard for which the prices have not been arranged to date and if you feel the need you can plug in a keyboard, hard drive, floppy drive and printer (pretty much a necessity if you're going to use the word processing facilities — unless the provider also gives Fax access as part of the services).

Jamie Minotto is the Sales and Marketing Director for NChannel, he sees their role as that of a service provider comparing it to Sky TV, with NChannel being the broadcast medium and the NetStation as the decoder box. Jamie explains, 'We will

Research results:

Research conducted by Rosslyn Research Ltd:

- Most Britons have heard of the Internet and understand it as a world-wide network of computers
- Less than 1 in 5 people have actually used the Internet - most of those only at work
- Britons are very keen to learn more about the Internet
- Nearly 3 in 4 people believe the Internet is something almost everyone will use in the future
- More than 50 per cent think the Internet is a wonderful source of information
- The Acorn NetStation is considered an excellent idea by everyone, because it provides easy and affordable access to the Internet using standard domestic equipment rather than expensive computer hardware
- NetStation's appeal is high among those with or without computers
- NetStation's appeal spans all ages, occupations and interests
- People want a NetStation for information, communication, leisure and business use
- People want a NetStation to help their children at school
- Following a NetStation demonstration, 1 in 3 say they would seriously considering buying one
- Over half of the public believe that the Internet is opening up a new world of communication
- Young people particularly would like to buy the Acorn NetStation to make new friends



be doing the billing, the service provision, the support, all that will be handled by us.'

NChannel see their specific target as families without a home computer, typically in the C1 and C2 socio-economic group, usually aged between 25 and 40.

Jamie explains that the research has shown that people 'want to be part of the Internet and find out what it's all about but were prohibited from doing so because of the cost of owning a personal computer.' With cost being a major factor to the consumer the NetStation had to be priced so that it is not out of reach for the target market. At £399 it is around the same price as a television or video and as Jamie says, 'the NetStation can connect to their TV set, giving them all the benefits of a multi-media PC for just £400.'

Get there early

NChannel are currently in discussion with all the major retailers so the NetStation is hopefully going to be available from many high street outlets and if sales rocket as Jamie predicts it looks like there'll be quite a queue.

'There's a huge demand for people to participate in this new technology. The best estimate we have is that it will probably grow by 50-75 per cent per annum so, for example, if we ship 100,000 machines this coming year we'll sell 250,000 in the following year.' Jamie explains. He anticipates that initially they may not be able to make enough to meet the demand but this will mean that the price holds and will be good value for people.

It's so easy

You've bought your NetStation and taken it home. Plug it in and away you go – will it really be that simple?

Jamie expects it will be very much like this, 'it's a pretty simple box, the main questions will be, *I've connected it and it doesn't seem to work* or *I can't get it on my TV set*, but we think the manuals and documentation will take care of that. There will be a Frequently Asked Questions section in the documentation which will take people through it very simply, using lots of pictures and graphics.'

Sounds great, especially for those people who perhaps want a taster to see what all the hype about the Internet is about. Jamie goes on to explain, 'what we found in the research is that while people are fascinated by and would like to find out more, they don't want their lives complicated by the technology or by having a choice.'

This is reflected by what NChannel will offer to customers when they buy their NetStation. The basic service will probably include news, sport, travel, entertainment, home finance and not much more than that. It is envisaged that after approximately six months a Silver and Gold Service will become available which may mean more Cards for the family and access to different programs among other additional services.

Subscription is expected to cost £15 (including VAT) per month plus phone calls charged at a local rate. At the time of writing the access provider has not been decided although it is expected that whichever they use will provide a service which is faster or at least equal in terms of Internet speed as compared to using a PC.

Some features of the NetStation will not be addressed until the second release of the software, this includes home shopping and banking and targeting of businesses who may choose the Netstation as a network solution. NChannel will be engaged in monitoring their own progress and continuing research.

Dear Santa..

NChannel are hoping that the NetStation will be on sale for Christmas and there will be a huge public relations and advertising campaign leading up to this. The first big hurdle is already complete – awareness of the Internet is high and the research results show that there is considerable interest and desire to find out more. It's really a matter of getting people to part with the money.

Jamie is confident that sales will be good and expects that the NetStation will be, 'the alternative source for Internet provision and probably the largest in the home within the next year, we'll far outstrip the PC and it's cheaper than the PC by a factor of three.'

Getting into the market rapidly is vital and fortunately the Acorn NetStation and NChannel are at the forefront of this new phase in computing. It might not be long before the NetStation is stacked alongside the video in the living room.

As to the future, Jamie thinks that, 'prices will come down, quality of the service will go up and hopefully since we will be first to market, we'll have first mind share and brand share and the Acorn NetStation will be the product people want.' In the words of NChannel 'we're just a click away'. AU

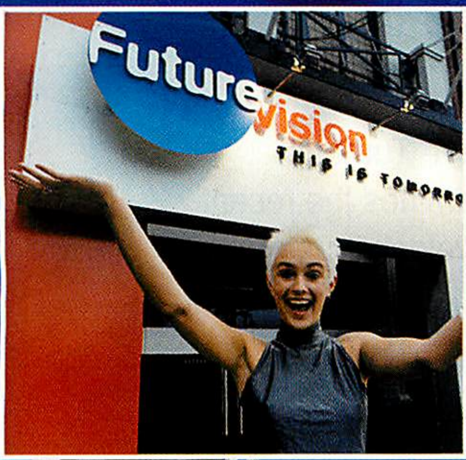


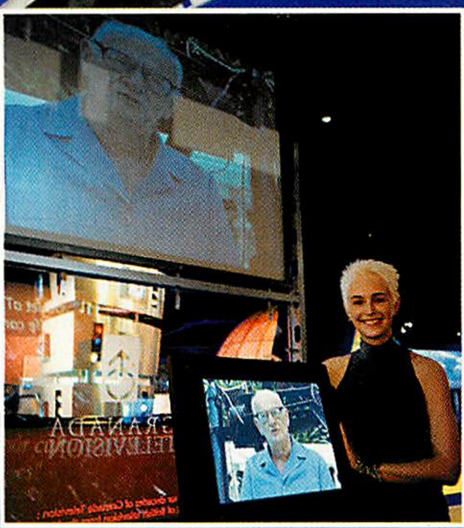
Hermann Hauser

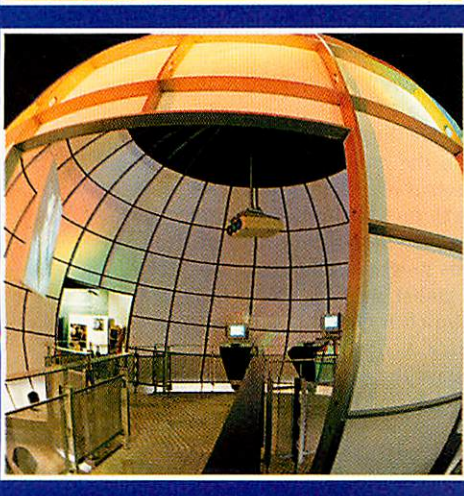
WIN FAMILY TICKETS TO GRANADA STUDIOS TOUR

Granada Studios Tour — The Award Winning

Prize worth £200!







We have five sets of family tickets to give away for Granada Studios Tour in Manchester. Each ticket admits two adults and two children and is worth £40

Seeing the future is easy with Granada Studios Tour's newest attraction, Futurevision. Walk through the history of television to a vision of the future where everyone surfs the Internet, learning is done via a modem, people work at home and not in offices, and shopping is done from your favourite armchair.

But Granada Studios Tour offers you much more than a glimpse through the future. You can walk down Britain's favourite street, Coronation Street, take a trip back in time on the stunning Baker Street film set, find out the secrets of television on the backstage and soundstage tours, scare yourself silly on the Aliens MotionMaster ride, or become a fearless TV reporter in the UFO zone. All this at Granada Studios Tour – that's real entertainment.

All you have to do to win this fabulous prize is answer the following questions:

1 What is the new attraction at Granada Studios Tour called?
a) Future Vision
b) Tomorrow's World
c) Future Life

2 Which is Granada's most famous street?
a) Coronation Street
b) Pigeon Street
c) Quality Street

3 Where is Granada Studios Tour based?
a) Manchester
b) Margate
c) Madrid

See the Future at Granada Studios Tour

COMPETITION ENTRY FORM

Write your answers here:

Question 1..........

Question 2..........

Question 3..........

Name (Mr/Mrs/Ms):..........

Address:..........

....

Postcode.......... Daytime Tel:..........

Now send your entry to: *Granada Competition, Acorn User, IDG Media, FREEPOST (8K3038), Macclesfield, Cheshire SK10 4NP.*

Transport to Granada Studios Tour is not included in this prize. Conditions apply.

☐ *Please tick here if you do not wish to receive promotional material from other companies.*

Net Computer ramblings

What does it all mean?

Steve Turnbull examines the recent developments at Acorn

About one year ago it looked all up with Acorn, things were going from bad to worse. But then something happened, coinciding with the arrival of the new MD David Lee. It didn't happen all at once but since it was clear something *had* to be done new ideas were put in motion, and it was something that boosted Acorn's share price through the ceiling in that period.

Xemplar

There was the deal with Apple creating Xemplar, much vilified and very misunderstood by the Acorn enthusiasts, and by Acorn critics. But you might be interested to know that the response from Apple users was identical: They too were outraged because Apple were selling out to Acorn.

Of course neither situation was true, the deal neither signalled the end of Acorn or the end of Apple. It *is* true that the Acorn education market froze during the period of uncertainty, with the exclusively Acorn education dealers and suppliers suffering badly with an abrupt cessation of sales. However this situation is alleviated as schools come to grips with the fact that they now deal with Xemplar.

Xemplar themselves, sensitive to the attacks from the Acorn enthusiasts, have quite forthrightly come out with their "white paper" declaring their dedication to RISC OS plus putting their money where their mouth is, to the tune of £1,000,000. The Acorn education market is quite safe in Xemplar's hands — and so is the Apple education market.

Acorn Online Media

Despite their somewhat isolationist viewpoint Acorn had been working with other companies in one arena: Set-top boxes for the interactive TV revolution.

When it started three years ago or so it was quite clear that the Acorn boxes were an ideal hardware solution and, in this instance, Acorn did not have to do any marketing to the broad public, that would be done by others when the STB revolution arrived.

But it didn't arrive. Instead we got the Internet revolution, this has not deterred Acorn nor many of its partners — though some have decided this is not the boat for them.

Current predictions now delay the STB revolution a few years, and it becomes an evolution, from narrowband Internet to broadband interactive TV. Acorn is still very well placed in this, perhaps even better placed, the authority that the Net Computer gives them makes them a first stop among those who want to build STBs. Development of the STB has been moved to the NC instead but as the machines are virtually equivalent, just the connection changes, this is by no means a step backwards.

Acorn Risc Technologies

There was a time when Acorn wouldn't give time of day to a company that *wanted* to buy their products. They were their own worst enemy – many Acorn pundits believed this to be true but it has come to light recently that it most definitely was true.

The breakthrough came with the decision to licence the technology freely. We, the Acorn enthusiasts, have always known that the technology we use is far superior to anything else on the market — at an equivalent (and, in some cases, much higher) price. But who else knew?

It was ARM Ltd that gave Acorn a much-needed leg-up when it came to licensing the software and complete computer systems: ARM Ltd could point at Acorn machines and say "Look, there are products that actually use the power of our chips." And from there it's a simple step to take to: "We also licence the software that works on these chips and has a proven track record and stability."

The interview with Peter Bondar, on Page 35, gives you a pretty good idea of how he feels about things and how he sees them going.

We've known that Acorn have had one of the best R&D departments in the world and now it's paying off big time. Some large corporation wanders up to ART and says "I want a computerised toaster. What can you do?" and Acorn pop-up within days with a prototype that works, using a stable operating system, not some half-baked lash-up that falls over when someone sneezes.

What does this all mean? Acorn licensing every part of their technology to dozens of major global players in the electronics market? It means that Acorn technology has the potential to become as pervasive throughout the electronics world as "Wintel" is invasive.

In the UK Acorn is dismissed as "that small education supplier" but Acorn is playing a much bigger game now and you can get some idea of how it is viewed globally with this true story: Very recently the head of a large American corporation flew, in his private jet, to Cambridge (not Larry Ellison, who has also done it). He checked out the technology, decided he wanted to use it and signed a six-figure personal cheque to Acorn, just for them to be going on with until the contracts were sorted out.

But all this does not mean Acorn have forgotten their enthusiasts, part of Acorn's success is the way that they can point to finished, sold product and show their new customers what their technology can do. Not only that but as Peter Bondar and Chris Cox have said, sales of Risc PCs have increased well beyond their predictions over the past year.

And all the contracts that Acorn sign contain the important proviso that Acorn themselves retain the intellectual property rights to their technology and that means that *you* benefit from the millions of pounds now being poured into Acorn by these global corporations. And Peter Bondar himself is committed to continuing to produce Acorn-only products, though nowadays the problem is more *what technologies do they leave out.*

Acorn Network Computer

The showpiece of the current Acorn arsenal is, of course, the deal with Oracle to produce the Reference Design for the Net Computer, and Acorn's own Net Station spin-off being sold by NChannel.

But what on earth does that mean? Does it have any bearing on Acorn, Acorn's third party software developers and you, the user? Well, it just might.

Oracle's Chief Executive Officer, Larry Ellison, has long dreamed of the Net Computer, and he really doesn't like Microsoft. Under Ellison's initiative a number of large corporations agreed a *Reference Profile* for the Net Computer, this describes the functionality that a machine must have for it to be approved as an official NC and permitted to carry the label.

Enter Acorn.

Through an interesting set of circumstances Larry Ellison heard about Acorn and hired them to produce the *Reference Design* which is a working prototype of the Reference Profile.

The Acorn NetStation, unsurprisingly, is identical to the Reference Design and, obviously, the Reference Design conforms to the Reference Profile and as such the NetStation has approval to be labelled an official NetComputer. So Acorn are the first off the blocks.

But there's more. In the harsh commercial world in which we live, development costs and time-to-market are two things big companies prefer to minimise.

A hypothetical company that wishes to build a NetComputer has, at present, two choices: Design and build their own, going through the necessary approval stage, taking up time and resources. Or licence Acorn's technology and reduce the time-to-market to just weeks.

Now there will be other versions of the NC based on different technologies, it would be naive to think there won't but Acorn's *will* be the lowest cost to manufacture

Then consider this, Peter Bondar said it, but I'll say it again: The NC operating system *is* RISC OS — of course it is — so perhaps Peter Bondar's comment about selling RISC OS to Korea, Japan and the US refers to the building of NetComputers? Maybe, maybe not.

But think on. The Internet Service Provider who supports the NetComputer will hold NCOS games for people to play online, but if they are to run they have to be RISC OS games.

It would be feasible to have educational software held at the provider end and every time someone accesses it (for their kids) it adds to their bill, the ISP takes some and the software supplier is credited.

The scenario goes even further, corporations spend an estimated $40,000 over the lifetime of a PC in terms of support — they are flaky and need a lot of support. A NetComputer requires almost no support and the applications are held on a central computer, loaded as needed, always the latest version which needs to be updated just once for the entire site. Plus the fact that an Acorn NetStation costs just £400 — much less if you buy in bulk. This is really where Larry Ellison is aiming his NCs because Oracle make the most powerful database systems in the world.

But if a person uses a PC at work so he buys a PC for his home? What if he uses a NetStation at work?

Bill Gates is scared of the NC, his book about the future of computers and the human race did not include the NC as a viable concept. He poo-pooed the NC when Oracle started signing up partners. When the NC became a reality he suddenly changed his mind and declared that Microsoft were working on the SIPC (Simply Interactive PC) and he did it in an attempt to stall the changing mindset of people from the PC home computer to the NC — but no PC maker can match the price, the PC is just too expensive even in a minimum configuration.

Acorn consider it unrealistic to believe that they can wipe-out the Wintel world domination – but I'm not so sure. AU



Vote in the ACORN USER Awards 1996

It's time to cast your vote in the *Acorn User* Awards 1996. So take a little time to look back over the year and let us know who and what you think has stood out from the rest in the Acorn marketplace.

Just fill in the form opposite with your votes in the Best Product, Best Advert, Best *Acorn User* Article/Series and Best Dealer categories and post it to:

Acorn User Awards 1996, *Acorn User*, IDG Media,
Media House, Adlington Park, Macclesfield, Cheshire, SK10 4NP
or e-mail your vote to auspecial@idg.co.uk

Best Product:

Best Advert*:

Best Article*:

Best Dealer:

*Best Article and Best Advert from the September 1995 to October 1996 issue (inclusive). Best Article can be a series or a one-off article.

Kimberley

Kimberley Computers Ltd.
Dept ACU10, 73 Chapel Street, Leigh,
Lancashire, WN7 2DA UK.

Tel +44 (01942) 677777
Fax +44 (01942) 672300

Email Sales@kcsprem.demon.co.uk
or info@kcsprem.demon.co.uk

8x CD ROM Players

Suitable for Risc PC 600/700/A7000



Enhance your computer by adding a Super Fast 8 Speed CD ROM.

No extra hardware required, simply fits on to the existing IDE interface in your computer. Takes 10 minutes to install, all drivers and leads supplied.

Supports CD-I, Mpeg, Kodak, etc 1200Kb/Sec <190Msec, 256Kb Cache, Quick Play Button, Multi Session.

CD ROM 8x £85.00 d £99.87

270Mb 2.5" Hard Drives

Suitable for A3000/A3010/A3020/A4/IBM Portables



Enhance your computer by adding a Fast 270Mb Hard Drive.

Allows the Acorn to run faster. Stores the equivalent of 337 full 800k Diskettes. Easy to fit, Instructions, Screws & Cable provided. Should take no more than 10 minutes. Requires Risc OS v3 or above.

Note: A3010/A3000 also require an IDE Interface

270Mb 2.5" IDE £99.00 d £116.32

RPC Upgrades

Back in Stock	Ex Vat	Inc Vat	
1Mb Vram upgradable	£65.00	£76.37	b
2Mb Vram	£120.00	£141.00	b
4Mb 72 Pin Simm	£25.00	£29.37	c
8Mb 72 Pin Simm	£45.00	£52.87	c
16Mb 72 Pin Simm	£85.00	£99.87	c
32Mb 72 Pin Simm	£189.00	£222.07	c
540Mb IDE Hard Drive	£125.00	£146.87	d
850Mb IDE Hard Drive	£135.00	£158.62	d
1Gb IDE Hard Drive	£149.00	£175.07	d
1.2Gb IDE Hard Drive	£165.00	£193.87	d
1.6Gb IDE Hard Drive	£185.00	£217.37	e
2Gb IDE Hard Drive	£215.00	£252.62	e
540Mb SCSI Hard Drive	£135.00	£158.63	d
1Gb SCSI Hard Drive	£189.00	£222.07	d
2Gb SCSI Hard Drive	£345.00	£405.37	f
4Gb SCSI Hard Drive	£680.00	£799.00	f
PC Card SXL-33	£199.00	£233.82	e
PC Card DX2-66	£249.00	£292.57	e
PC Card DX4-100	£299.00	£351.32	e
PC Card 586-100	£499.00	£586.32	e
CPU FAN COOLER	£8.50	£9.99	b

Did You Know that the chances of your ARM processor failing are much higher if you have a PC Card fitted. The PC Card raises the operating temprature of the ARM Card, to combat this, you will need a PC CPU Cooler. **Highly Recommended**

Hex (6x) CD Rom IDE	£75.00	£88.12	e
Oct (8x) CD Rom IDE	£78.00	£91.65	e
Quad (4x) CD Rom SCSI	£75.00	£88.12	e
Oct (8x) CD Rom SCSI	£185.00	£217.37	e
Arm 710 Upgrade	£125.00	£146.87	c
2nd Slice (inc PSU)	£99.00	£116.33	e
2 Slot Backplane	£30.00	£35.25	b
16 Bit Sound Upgrade	£59.00	£69.32	c
MIDI Port Podule	£45.00	£52.87	c
User Port Analogue/MIDI	£99.00	£116.33	c
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
RPC Technical Ref Man.	£50.00	£50.00	e
Heavy Duty Keyboard	£25.00	£29.37	e
RPC Std Keyboard	£25.00	£29.37	e
Keyboard Ext. Cable 2M	£6.50	£7.64	b
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Ext. Cable 2M	£6.50	£7.64	b
Monitor Ext. Cable 2M	£6.50	£7.64	b
14.4k Ext. Fax/Modem	£79.00	£92.82	e
28.8k Ext. Fax/Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
15" FST Monitor 0.28dp	£225.00	£264.37	f
17" Monitor 0.28dp	£480.00	£564.00	f
17" Monitor 0.26dp	£535.00	£628.62	f
21" Monitor 0.26dp	£ Call	£ Call	f

A5000 Upgrades

	Ex Vat	Inc Vat	
2-4Mb Mem Upgrade	£89.00	£104.57	b
4-8Mb Mem Upgrade	£229.00	£269.07	d
540Mb IDE Hard Drive	£125.00	£146.87	d
540Mb SCSI Hard Drive	£135.00	£158.63	d
1Gb SCSI Hard Drive	£189.00	£222.07	e
2Gb SCSI Hard Drive	£545.00	£640.38	f
4Gb SCSI Hard Drive	£680.00	£799.00	f
All CD Roms are External			
Twin (2x) CD Rom Par.	£175.00	£205.63	e
Quad (4x) CD Rom SCSI	£175.00	£205.63	e
Oct (8x) CD Rom SCSI	£245.00	£287.87	e
14.4k Ext. Fax/Modem	£79.00	£92.83	e
28.8k Ext. Fax/Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
Keyboard Ext. Cable 2M	£6.50	£7.64	b
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Ext. Cable 2M	£6.50	£7.64	b
Monitor Ext. Cable 2M	£6.50	£7.64	b
Risc OS 3.1 Chipset	£29.00	£34.07	b
Risc OS 3.1 Full Kit	£50.00	£58.75	e
Risc OS 3.1 10 Pack	£290.00	£340.75	e
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
Float. Point Accelerator	£115.00	£135.12	c
User Port Analogue/MIDI	£55.00	£64.62	c

A4000 Upgrades

2-4Mb Mem Upgrade	£83.00	£97.52	b
540Mb IDE Hard Drive	£125.00	£146.87	d
540Mb SCSI Hard Drive	£135.00	£158.62	d
1Gb SCSI Hard Drive	£189.00	£222.07	e
Keyboard Ext. Cable 2M	£6.50	£7.64	b
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Ext. Cable 2M	£6.50	£7.64	b
Monitor Ext. Cable 2M	£6.50	£7.64	b
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
All CD Roms are External			
Twin (2x) CD Rom Par.	£175.00	£205.63	e
Quad (4x) CD Rom SCSI	£175.00	£205.63	e
Oct (8x) CD Rom SCSI	£245.00	£287.87	e
14.4k Ext. Fax/Modem	£79.00	£92.82	e
28.8k Ext. Fax/Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e

A3010 Upgrades

	Ex Vat	Inc Vat	
1-2Mb Mem Upgrade	£39.00	£45.82	b
2-4Mb Mem Upgrade	£89.00	£104.57	b
IDE Interface for 2.5"	£55.00	£64.62	c
170Mb IDE Hard Drive	£89.00	£104.57	d
270Mb IDE Hard Drive	£99.00	£116.32	d
540Mb IDE Hard Drive	£160.00	£188.00	d
Ext. Par. CD ROM 2x	£175.00	£205.62	e
14.4k External Modem	£79.00	£92.83	e
28.8k External Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Extension Cable	£6.50	£7.64	b
Monitor Extension Cable	£6.50	£7.64	b
Scart TV Lead	£8.50	£9.99	b
Microvitec 14" Monitor	£225.00	£264.37	e

A3000 Upgrades

1-2 Mem Upg Non Exp.	£25.00	£29.37	b
1-2 Mem Upgrade Exp.	£55.00	£64.62	b
2-4 Mem Upgrade Chips	£79.00	£92.82	b
1-4 Mem Upgrade	£114.00	£133.95	b
Serial Port upgrade	£19.00	£22.32	b
IDE Interface for 2.5"	£55.00	£64.62	b
170Mb IDE Hard Drive	£89.00	£104.57	d
270Mb IDE Hard Drive	£99.00	£116.32	d
540Mb IDE Hard Drive	£160.00	£188.00	d
14.4k External Modem	£79.00	£92.82	e
28.8k External Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Extension Cable	£6.50	£7.64	b
Monitor Extension Cable	£6.50	£7.64	b
Scart TV Lead	£8.50	£9.99	b
		£9.99	b
Risc OS 3.1 Chipset	£29.00	£34.07	b
Risc OS 3.1 Full Kit	£50.00	£58.75	e
Risc OS 3.1 10 Pack	£290.00	£340.75	e
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Podule Casing	£20.00	£23.50	c
MFM Interface	£15.00	£17.62	b
User Port Analogue./MIDI	£55.00	£64.62	c
800k Floppy Disk Drives	£38.00	£44.65	c

- 800k In Stock (dealer Enquires Welcome)

Syquest

Internal Drives	Ex Vat	Inc Vat	
105Mb SCSI	£99.00	£116.32	e
EZ 135Mb SCSI	£89.00	£104.57	e
270Mb SCSI	£150.00	£176.25	e
270Mb IDE	£150.00	£176.25	e
External Drives & PSU			
105Mb SCSI	£99.00	£116.32	e
270Mb SCSI	£160.00	£188.00	e
Cartridges			
200Mb	£52.00	£61.10	b
270Mb	£38.00	£44.65	b
135Mb	£15.00	£17.63	b
40Mb	£37.00	£43.47	b

Scanners



Scanlight 256	£129.00	£151.57	e
Scanlight 256 Video	£189.00	£222.07	e
Flatbed A4 Colour			
Mustek SP2400dpi SCSI	£270.00	£317.25	e
Epson GT 5000 SCSI	£379.00	£445.32	e
Epson GT 8500 SCSI	£429.00	£504.07	e
Epson GT 9000 SCSI	£529.00	£621.57	f
HP Scanjet 4c SCSI	£645.00	£757.87	f
Vision 24 Digitiser	£65.00	£76.37	e
Hi-Vision Digitiser A5k	£90.00	£105.75	e
ImageMaster & Twain	£25.00	£29.37	b

Speakers



80w Speakers & Amp	£25.00	£29.37	e
240w Speakers & Amp	£38.00	£44.65	e
300w Speakers & Amp	£45.00	£52.87	e
Microphone	£7.00	£8.22	b
Clip On Microphone	£6.50	£7.64	b

Stylus 820



720 dpi Monochrome Inkjet Printer
Upgradeable to Colour - 3 Year Warranty
Epson Stylus 820 £155.00 £182.12 e

Stylus Colour IIs



720 dpi Colour & Black Inkjet Printer
3 Year Warranty, Interchangeable Cartridge
Epson Stylus Colour IIs £175.00 £205.62 e

Stylus Colour 500



720 dpi Photo Real Colour Inkjet Printer - 3 Year Warranty, Double Density Black. Prints on to Plain, Coated & Glossy Paper & OHP's.

Supplied with Acorn Drivers on request.
Stunning Output - Turbo Driver Available
Epson Stylus Colour II £250.00 £293.75 e

Arcshare™

Acorn to PC Networking Software

PC to Acorn Networking has never been easier than this!

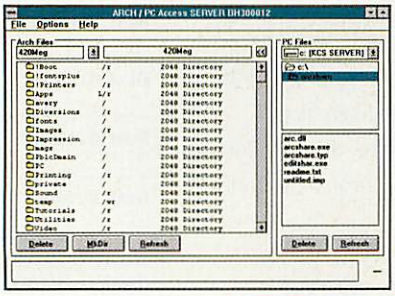
Arcshare is a program that runs from the PC, and fools the PC into thinking it is an Acorn Access system.

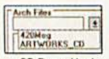
This gives that option of copying files from the PC to the Acorn or vice versa. Using an easy to use point & click interface on the PC you can quickly retrieve files from any Acorn computer on the network.

Any size of file can be transfered. If a file is transfered from an Acorn to a PC, then back again, you'll find that the filetypes are automatically updated.

Ring today, tp find out how Arcshare can help you integrate PC systems to existing Acorn networks.

Note for Programmers: Arcshare can now support DDE Calls from the PC, ring for further details.





CD Roms, Hard Drives & Other Acorn Computers can be used by the PC



The PC Directory looks like just another Acorn Directory, thanks to Automatic Remote filetyping. Just drag & Drop the file using the Acorn interface.

Very easy to use!



Arcshare is the Only PC-Acorn network software that allows file transfers both ways !



Latest Version of Server now includes a DDE Interface!

Arcshare Server £99.00 b £116.33

New Products New Products

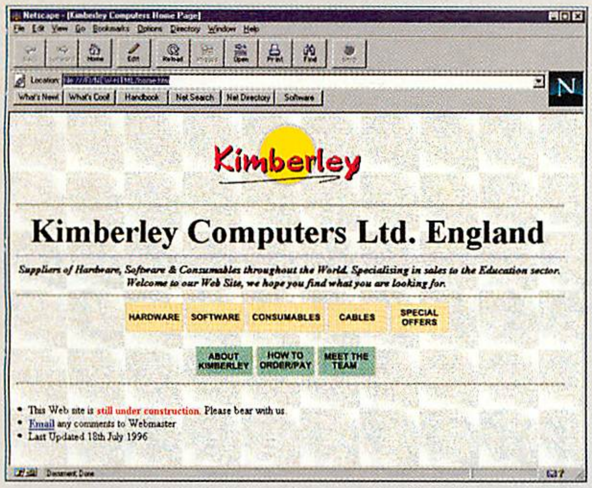
SPARE PARTS

We now hold a large stock of Genuine Acorn and Compatible spares for most models of Acorn Computers (From Risc PC to BBC's).

Full Spares Catalogue on Disk, Send Disk & SAE or Email your Request.

Old ACORN Software To CLEAR

Hugh Amount of Old Acorn Software to Clear, List available on Disk, Send Disk & SAE or Email your Request. No Sensible offer refused. All Must go to make way for new Software Lines!



www.kimberley.com

The Kimberley Computers Web Site. Full of information about Acorn related products. Easy to use, fast loading graphics, email ordering, well laid out. A "Must Visit" site for all Acorn owners with Internet access.

Latest Prices are always to be found on the Web pages. Its updated on a weekly basis. Full Acorn Spares & Upgrades list, Cables, Printers, Consumables, Special Offers & Clearance items (www only).

If you don't have a modem and Internet access, check out our NEW LOW modem prices on the page opposite. We can help get you started. See you on the .Net!

URL *http://www.kimberley.com*

Extension Cables	Ex Vat	Inc Vat
5 Pin Din Ext. 2M	£6.50	£7.64 b
PS2/Keyboard Ext. 2M	£6.50	£7.64 b
15 Pin D vga/svga Ext. 2M	£6.50	£7.64 b
9 Pin D Serial Ext. 2M	£6.50	£7.64 b
25 Pin D Serial Ext. 2M	£6.50	£7.64 b
Acorn Mouse Ext. 2M	£6.50	£7.64 b
Hot/Cold Mains Lead 2M	£5.00	£5.88 b
Comms Cables		
9/25 Pin - 9/25 Pin Laplink	£8.50	£9.99 b
BI Directional Data 25 Pin D	£11.00	£12.93 b
25 Pin D M-F RS232 2M	£6.50	£7.64 b
9 Pin D M-F RS232 2M	£6.50	£7.64 b
9 Pin D - 25 Pin M Modem	£6.50	£7.64 b
Archimedes Modem Cab 2M	£8.50	£9.99 b
Printer Cables		
BI Directional 2M	£2.55	£3.00 b
BI Directional 3M	£5.00	£5.88 b
BI Directional 5M	£7.00	£8.22 b
BI Directional 10M	£12.00	£14.10 b
Serial Printer Cable 2M	£6.50	£7.64 b
BBC Printer Cable	£6.50	£7.64 b
Centronics 36w-36w 2M	£6.50	£7.64 b
Centronics 36w-36w 2M	£8.50	£9.99 b
Networking Cable/Accs		
BNC Cable/Plugs 2M	£5.00	£5.88 b
BNC Cable/Plugs 3M	£6.00	£7.05 b
BNC Cable/Plugs 5M	£8.00	£9.40 b
BNC Cable/Plugs 10M	£13.00	£15.28 b
BNC HQ Cable Reel 100M	£60.00	£70.50 b
BNC Terminator	£2.00	£2.35 b
BNC Solderless Crimp Plug	£1.25	£1.47 b
BNC Strain Relief Boot	£0.50	£0.58 b
BNC In Line Connector	£2.00	£2.35 b
BNC T Piece	£1.50	£1.75 b
BNC Wall Plate	£7.00	£8.22 b
Internal Cables		
4cm IDE Cable 2.5"	£5.00	£5.88 b
6cm IDE Cable 2.5" (Acorn)	£6.50	£7.64 b
Twin Floppy Cable (PC)	£2.55	£3.00 b
Single IDE Cable 18"	£2.00	£2.35 b
Twin IDE Cable 18"	£2.55	£3.00 b
Custom IDE Cable	ASK	ASK b
5.25" Power splitter	£2.55	£3.00 b
3.5" Power Splitter	£2.55	£3.00 b
CD Audio Cable Generic	£2.55	£3.00 b
Acorn to Monitor		
A300/3000 - CM8833 Mk2	£8.50	£9.99 b
A300/3000 - CM8833 Mk1	£8.50	£9.99 b
A300/3000 - CM8833 Scart	£8.50	£9.99 b
A300/3000 - Amstrad CPC	£8.50	£9.99 b
A300/3000 - AKF30	£8.50	£9.99 b
A300/3000 - AKF50/Msync	£8.50	£9.99 b
A3010/4k/5k - CM8833 Mk2	£8.50	£9.99 b
A3010/4k/5k - CM8833 Mk1	£8.50	£9.99 b
A3010/4k/5k - CM8833 Scart	£8.50	£9.99 b

Switch Boxes	Ex Vat	Inc Vat
2 - 1 Printer (Centronics)	£11.75	£13.81 b
4 - 1 Printer (Centronics)	£15.75	£18.51 b
2 - 1 Printer (Serial 25 Pin)	£11.75	£13.81 b
4 - 1 Printer (Serial 25 Pin)	£15.75	£18.51 b
4 Comp. - Mon/PS2 Keyb	£15.75	£18.51 b
4 Comp. - Mon/5 Pin Keyb	£15.75	£18.51 b
2 - 1 Serial Switch 25 Pin	£11.75	£13.81 b
4 - 1 Serial Switch 25 Pin	£15.75	£18.51 b
2 - 1 Scart Switch Box	£11.75	£13.81 b
4 - 1 Scart Switch Box	£15.75	£18.51 b
2 - 1 BNC Make b4 Break	£11.75	£13.81 b
4 - 1 Printer Auto Sharer	£46.00	£54.05 b
Dust Covers		
Acorn A5000	£7.00	£8.22 b
Acorn A4000	£7.00	£8.22 b
Acorn A3010/A3020	£4.50	£5.29 b
Canon BJ10 (Not with ASF)	£4.50	£5.29 b
Canon BJ200/4000	£4.50	£5.29 b
Canon BJ600/610	£4.50	£5.29 b
HP Deskjet 500 series	£4.50	£5.29 b
HP Deskjet 600 Series & 850	£4.50	£5.29 b
Inkjet Cartridges		
Canon BC01	£14.00	£16.45 b
Canon BC02	£15.00	£17.63 b
Canon BJC4000 - Black Tank	£7.00	£8.22 b
Canon BJC4000 - Col Tank	£12.00	£14.10 b
Canon BJC4000 - Col/Bk. H	£21.00	£24.68 b
Canon BJC600 - Black Hcap	£8.00	£9.40 b
Canon BJC600 - Cyan	£6.20	£7.29 b
Canon BJC600 - Magenta	£6.20	£7.29 b
Canon BJC600 - Yellow	£6.20	£7.29 b
Canon BJC800 - Black	£13.50	£15.86 b
Canon BJC800 - C/M or Y	£17.00	£19.98 b
Canon BJ30/70 - Black 3 Pk	£10.50	£12.34 b
Canon BJ70 - Colour Tank	£14.50	£17.04 b
Canon BJ300/330 - Black	£11.50	£13.51 b
Integrex 132 - Black	£10.02	£11.77 b
Integrex 132 - Colour	£18.00	£21.15 b
Epson Stylus Col - Black	£12.00	£14.10 b
Epson Stylus Col - Colour	£22.00	£25.85 b
Epson Stylus Col II - Black	£12.00	£14.10 b
Epson Stylus Col II - Colour	£22.00	£25.85 b
Epson Stylus 800/1000 Black	£8.00	£9.40 b
HP 310/Portable High Cap	£16.00	£18.80 b
HP Deskjet 500 - Black	£16.00	£18.80 b
HP Deskjet 500 - Tri Colour	£20.00	£23.50 b
HP Deskjet 600 - Black	£19.25	£22.62 b
HP Deskjet 600 - Tri Colour	£22.00	£25.85 b
HP Deskjet 850 - Black	£19.25	£22.62 b
HP Deskjet 850 - Tri Colour	£22.00	£25.85 b
Olivetti JP150 - Black	£15.25	£17.92 b
Olivetti JP150ws - Black Ref.	£32.00	£37.60 b
Olivetti JP350/450 - Tri Col	£28.00	£32.90 b

Large Range of Ribbons, toner, Labels, Paper, Diskettes, Software, Hardware, Always in stock, call for your requirements.

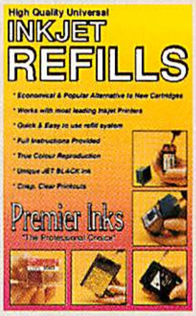
INKJET REFILLS

Using Premier Inks refill kits are an economical way of Re using your existing print cartridge. Don't throw it away, refill it - Over 130 printers supported, including the most popular makes. Call for sample printouts.

COLOURS AVAILABLE FROM PREMIER INKS

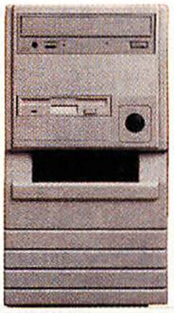
Premier Inks

	Ex Vat	Inc Vat
Single Refill Kit 1x22ml	£5.10	£5.99 a
Twin Refill kit 2x22ml	£9.35	£10.99 a
Tri Colour refill Kit 3x33ml C/M/Y	£14.46	£16.99 a
Quad Refill Kit 4x22ml	£17.01	£19.99 a
Bulk 1 Refill Kit 1x125ml	£17.87	£21.00 b
Bulk 2 Refill Kit 1x250ml	£32.34	£38.00 b
Bulk 3 Refill Kit 1x500ml	£42.55	£50.00 b



"Better Value than the PC Card"

5x86 100Mhz CPU
PCI Motherboard
1Mb PCI SVGA Card
8Mb RAM
850Mb EIDE Hard Drive
8x CD ROM
16 Bit Stereo Soundcard
Mini Tower Case
1.44Mb Floppy Drive.
Switch Box &
All Cables



ONLY
£499 & Vat

16Mb Option, add £45 & Vat.

Thinking of buying a 5x86 PC card for your Risc PC?

Think Again....

Why not buy a complete 5x86 PC - Here's How:

Buy a Complete system with a monitor & keyboard switch box. This gives you complete compatability & it runs a lot faster than the PC card will. Has its own 8Mb RAM, a fast 8x CD ROM, Large Hard drive, fully expandable system. This system comes with the New PQ Adapter which makes this CPU outperform a Pentium P90 -

Other Higher Spec systems available, Call.

New Products   New Products



CASIO QV-10A

LCD Digital Camera with TFT Active Colour Display.

£400.00   £470.00   E

Above Picture, taken by the Camera

Portable Camera, capable of storing 96 images, on 16 Mbit Flash Disk. Each picture can be downloaded to your PC.

Pictures taken in True Colour mode. Excellent results.

Full tilt n view lens, zoom facility, brightness control, automatic variable shutter speed

Built in Timer, instant playback.

Ideal for taking Product Photo Shots, Photos of groups, Field trips, Estate Agents.

No Film purchases or duplication costs at all. Simply press the button, and save to your PC (sorry, not available for Acorn yet!)

Video Output to TV screen.

Kimberley Computers Ltd

We can accept orders for goods in a variety of different ways:

By Telephone:
Have your Credit/Debit card ready, our staff will take the necessary details to ensure your order reaches you As Soon as Possible, usually Next Day.

By Post:
Carriage Charges
A=£1.00, B=£2.00, C=£3.50
D=£4.50, E=£7.00, F=£9.00

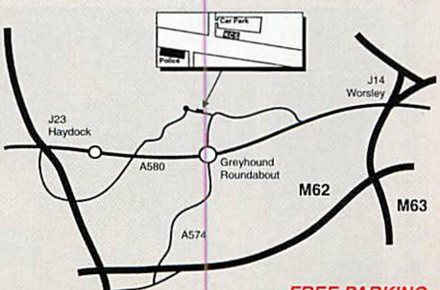
Kimberley Computers Ltd,
73 Chapel Street,
Leigh,
Lancashire, WN7 2DA

Post your order, giving FULL details, and most importantly, your phone number during the day. If paying by Credit card, we will need the full card number and Expiry date. If paying by switch we will also need the Issue number, if paying by cheque, please make cheques payable to "Kimberley Computers Ltd."

By Email: sales@kcsprem.demon.co.uk

By Official Order Post or Fax the order to: 01942 672300

Terms:
Goods Not Sold on a Trial basis. Prices & specs subject to change without prior notification. Goods are subject to availability. We reserve the right to charge a Re-stocking Fee for Non Faulty goods returned. In the case of returns, phone before sending. We will not be liable for goods sent without proper Returns Authorization. We will do our best to help, but make sure you know what you are asking for and its suitability for use with your hardware configuration.



FREE PARKING & Disabled Access

Tel: 01942 677777

VISA DELTA Access SWITCH

Credit Cards are not debited until goods are ready for despatch.
We are registered under the Data Protection Act, for your safety

Biggest-ever range of new products for Acorn

The Acorn World Show at Olympia 2, November 1-3 is set to see the biggest ever range of new and extended product introductions for the RISC OS platform. The stimulus for this development has been the introduction of the new Strong ARM processor by Acorn Risc Technologies (ART), and the investment of £1million in development of RISC OS based products by Xemplar Education.

ART at Cambridge is co-operating with developers creating new products and adapting existing software in order to achieve compliance with StrongARM. 'A very high proportion of software tested performs excellently with StrongARM' says Chris Cox at ART. 'This augurs well for Acorn World, which we are beginning to refer to as the "StrongARM Show" here at ART.'

The show is already boasting an impressive list of seminars and product demonstrations, and ART have committed a StrongARM Risc PC to the main theatre to cope with the new software which will be on display. Over the weekend, there will ne a full programme of seminars and demonstrations.

Seminar programme

All speakers will be experts in their fields and they will cover a wide range, including publishing, the Internet, and educational home use of computers. Xemplar will also be presenting a session exploring 'the use of Risc technology throughout the curriculum', while ART will run sessions looking specifically at StrongARM, and the future of RISC OS as a leading operating system. Planned seminar sessions so far include:

The Xemplar Plan
The Future for RISC OS
StrongARM
Publishing on the Internet and Intranet
General Publishing on Acorn Systems and software
The home educational use of computers

The programme is still evolving and details will be communicated in the press and on the Acorn World website (http://www.eps-events.com/acorn-world), or tel: 0701 0709 909.

Product demonstrations

A growing number of developers have applied to present software demonstrations in the main theatre in support of the seminar programme. This is in addition to the many on-stand demos which are always a feature of Acorn world. While many of the products to be launched at the show will be StrongARM compliant versions of existing programmes, with added features which take advantage of the extra processing power, there are also some completely new applications:

Acorn Risc Technologies

ART will be demonstrating StrongARM cards which will also be available for public sale for the first time from dealers at the show, The cards will be incorporated in Acorn A7000 and Risc PC computers, as well as being available as a user-fitted component — a simple operation with the upgradeable RiscPC. The company is heavily involved in a programme of adapting Risc Technology to a variety of other applications: portable technologies and the much publicised 'Acorn NetStation' among others, and these will be demonstrated as prototypes.

Xemplar

Xemplar is the only IT supplier currently able to offer schools genuinely multi-platform networking – permitting the use of Acorns, Macs and PCs in a single network. Within 18 months, the company plans to introduce a computer which will run both Mac OS and RISC OS, thus eliminating compatibility problems altogether.



Visitors to the show will be able to talk to experts from Xemplar about the enormous range of educational resources now available from the company, try some of the new products, and catch a glimpse of highlights from the exciting two-year research programme to develop the next generation of educational computing products.

Computer Concepts embrace StrongARM

Computer Concepts have put an emphatic stop to rumours of their waning enthusiasm for the platform by announcing that Acorn World will see the launch of Strong ARM versions of the *Impression* family of publishing products, *Artworks* and turbo printer drivers.

'We are excited about the dramatic improvements in performance that we expect to obtain from our software running under StrongARM' says managing director Charles Moir. Tests on the Artworks renderer have suggested that a 5-6 fold increase in speed can be expected with the new versions.

Beebug challenges for publishing top spot

Hard on the heels of Computer Concepts comes Beebug, whose new product *'Ovation Pro'* threatens to rival the Impression family as the RISC OS standard for publishing software. *Ovation Pro* has just shipped its first set of 'evaluation copies' to specialist DTP users, and early indications are that it is an excellent product which has qualities equalling those of any publishing package on any platform. Beebug plan to issue spot colour and colour separation updates during September, and have the full version 1 release available for launch and public sale at Acorn World.

Dalriada 'applets' enhance publishing software

Dalriada believe the future for DTP software is the development of ever more sophisticated 'applets' — small applications which operate within existing DTP programs — capable of customisation by individual users, and adding value and functionality at a very reasonable cost.

Tablemate, Graphmate and *DiagramIT*



World

already operate within *Impression* and *Ovation*, and the latest versions will be on show and sale at Acorn World. The World Wide Web is also a point of focus for this developer, who will be offering and demonstrating interactive HTML and Table Editors.

ESP plan StrongARM MIDI sequencer

ESP Software specialise in sound and MIDI applications and support. This includes writing the 16 bit sound system for Acorn and developing a software based MIDI Synthesiser. They will demonstrate a number of products under development which will provide extensive support for sound and MIDI processing on an Acorn machine, and will make full use of the StrongARM processor. ESP hope to have a school-based product for MIDI sequencing ready for the Show, which will herald the arrival of an application for more general use among musicians.

ARMed Forces Software

'More software for the RiscPC than for any other computer on any other operating system' is the modest claim made for WinRisc, which allows Windows 3.1 software, running on the PC card to appear to be fully integrated with RISC OS software. AFS will also be demonstrating their RSDFS networking/teleworking system and previewing forthcoming software releases.

ANT Networking

ANT Ltd is to bring 'multiple mode' support to its new low-cost range of Ethernet network interface cards for Acorn computers. This will enable users with a PC Card fitted to their Risc PC to connect the PC and RISC OS environments to a network simultaneously, sharing a single Ethernet card. For example, the user could be logged on to a Windows server to run a PC database application while using the RISC OS side to surf the World Wide Web using the ANT Internet Suite. The company will also launch version 2 of its popular Internet Suite with many additions and enhancements.

R-Comp

R-Comp will be demonstrating the latest version of its highly acclaimed Web Page Authoring system, HTMLEdit 2. New for Acorn World is a special pack for HTML authoring on RISC OS machines. It will not be HTMLEdit dependent, but will naturally extend the range of tools available to existing users. It will include a visual HTML table creator and a professional Image Map editor for the creation of 'clickable' image maps for WWW images.

There will be a standalone version of 'Image Conversion Assistant' and a new batch processing utility which will adjust RISC OS filenames to have PC file extensions, base on their RISC OS filetype, for converting to and from the PC platform, R-Comp will also be improving its range of graphics products with the release of a new version of the Tabby driver for the popular, low-priced Tabby graphics tablet.

Serious Statistical Software

The suite of high performance statistical software products by SSS covers requirements from straightforward, simple data description and analysis to advanced techniques valuable in academic and industrial research. Simple but comprehensive data entry and import facilities coupled with extensive, high quality and easily used graphics enhance understanding and interpretation of data.

Continuous development over ten years has ensured robustness and reliability. These products are now recognised as providing a much needed solution to the triple needs of statistics teaching, project analysis by pupils in different departments and solving taxing administrative performance problems.

Fabis Computing

Acorn World '96 sees the launch of Fabis Computing's *Easy Font Professional*; the replacement product for their hugely successful *Easy Font 3. Easy Font Pro*, as the name suggests, is aimed at the professional and serious DTP user, and contains many new and innovative features. It retains the features which make *Easy Font 3* such an invaluable resource, including real-time WYSIWYG display, creation of new weights and styles of fonts and compaction of fonts of up to 40 per cent.

Spacetech

Photodesk2 is compact and efficient, retaining full professional functionality whilst retaining a simple interface with speed and ease of use. Television companies and repro houses are buying ARM powered RISC OS machines just to run this application, the enthusiast and educational user can also benefit by adopting the solution that the professionals are coming round to prefer.

Spacetech hope to have an announcement at the show about the additions to the *Photodesk* range of products. Also it is expected that they will be previewing the new 'Gemini' version of *TopModel* from Sincronia Multimediali of Italy with Paolo Rossi in attendance. Attractive discounts will be offered on some products to customers who purchase or order at the show.

Oregan Developments

At Acorn World Oregan will demonstrate 'Prosound', a fully integrated eight channel hard disc recording, sound editing and audio processing suite. The extendable modular design of ProSound allows it to be tailored to the users' own application. The Oregan SPDIF interface allows direct capture and output of digital audio data, between a Risc PC and an SPDIF compatible DAT recorder. The device also permits economical backup of hard discs onto DAT tape, using the software provided, and as such is a very convenient piece of hardware for anyone owning a DAT recorder.

The *CineWorks* package is now StrongARM compliant, but has several other improvements including a new path editor; improved AVI loaders; additional transitions and filters; timecode support and improved 16 bit soundtrack routines.

Demonstrations of early versions of *MIDIWorks* — aiming to be a much needed top-end MIDI sequencer for the Acorn RISC OS platform — will be ongoing throughout the show.

Warm Silence Software

MovieFS version 2 will be available for demonstration at least, and the company hope to have supplies ready for sale. It will play more movies in more formats, faster, with less memory! VRView will be available in its complete version with better memory, enhanced quality and an improved interface. Also planned: an Acrobat reader for Adobe Acrobat files, and a new Floating Point Accelerator. AU

Details of more new products and planned demonstrations are reaching the organisers daily. Details will be publicised as they become available, and posted on the Acorn World Website on:
http://www.eps-events.com/acorn-world
or tel: 0701 0709 909

iSV Products Draw Works2

"...it may hardly be worth buying any other vector graphics program! Order it now - I guarantee you won't be disappointed!"

Christopher Jarman Archive August 1996

- DrawWorks2 integrates fully with Draw.
- All the new buttons appear to be part of Draw
- Draw Menus can be accessed from button bar
- Click on the justify tool and the justify menu opens
- Open colour pickers with just one mouse click
- Quickly open line width, join and pattern menus
- Select Fonts and pt size from the button bar
- Tear off version of Draws normal toolbox
- Button bar can be vertical or horizontal & torn off
- Our new AutoOLE system

NOW

Shaded
Scrunched
ViVID
Amazing

DrawWorks2 adds the following new features

Kerning of Outline Fonts	Path bending & warping
Path Merging	Convert thin lines to 0.25pt
Path splitting	Wrap path objects around 3D objects
Colour filters	Auto-grouping of objects
Full file information window	Full control over preferences
Decode fonts used in a file	Isometric transformations
Set Outline colour to fill colour	Define your own transformations

"Whenever I load Draw I always have (it) loaded."
Arc World review of DrawWorks1

"...just what you need...highly useful."
Acorn User review of DrawWorks1

Only £21.50 inc UK p&p

Version 2.1 Also offers Contrast & Brightness Filters CMYK separations

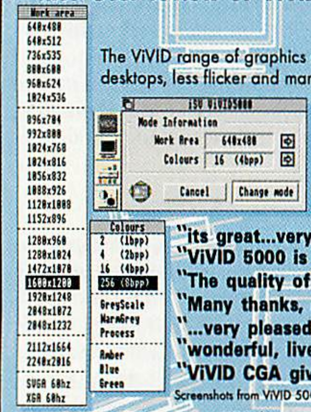
Advert Produced with DrawWorks2

graphics enhancers for pre-RiscPC computers

ViVID

"...an essential purchase."
Risc User review of ViVID 5000

From Only £11.50 inc UK p&p



The ViVID range of graphics enhancers offer larger desktops, less flicker and many more 256 colour modes.

"Remarkable Verdict:Excellent"
Risc User review of ViVID 20

ViVID CGA	**£11.50**
ViVID Lite	**£11.50**
ViVID 20	**£11.50**
ViVID 5000	**£16.50**
ViVID Gold	**£21.50**

"its great...very easy to use..."
"ViVID 5000 is Excellent!" "...a great package..."
"The quality of the software is top rate."
"Many thanks, an excellent product." "...overwhelming..."
"...very pleased with ViVID20. Thank you."
"wonderful, lives on my icon bar permanantly."
"ViVID CGA gives me a much improved screen."

Screenshots from ViVID 5000. Unsolicited comments from satisfied customers

	TV Type Monitor	14" Multisync No VIDC enhancer	14" Multisync with VIDC enhancer	15/17" Multisync with VIDC enhancer	Computer Concepts ColourCard Gold™
A310	ViVID CGA	ViVID Lite	ViVID 20	ViVID 20	ViVID Gold
A3000	ViVID CGA	ViVID Lite	ViVID 20	ViVID 20	ViVID Gold
A400 series	ViVID CGA	ViVID Lite	ViVID 20	ViVID 20	ViVID Gold
A540	ViVID CGA		ViVID 20	ViVID 20	ViVID Gold
A5000	ViVID CGA		ViVID 5000	ViVID 20	ViVID Gold
A4000	ViVID CGA		ViVID 5000	ViVID 20	
A3010/20	ViVID CGA		ViVID 5000	ViVID 20	

ViVID compatibility chart

iSV Products
86 Turnberry, Home Farm
Bracknell, Berks, RG12 8ZH
Tel 01344 55769

All prices include UK carriage
Overseas orders please add £2.00
All details are correct at the time of going to press E&OE. All Trademarks are acknowledged
Discounts are based upon prices exc p&p

picture book 2

6 High-quality programs specially designed to help pre-school, primary school and special needs children with Reading, Spelling and Counting effectively and very enjoyably!

- ***AlphaBook***
- ***FlashCard***
- ***Count 'em***
- ***Spell It***
- ***Snap***
- ***Word Match***

NEW

Each program uses Alphabet files with professionally drawn graphics, sound effects and spoken words and offers many setting choices to suit an individual childs ability. For RISC OS 3.1 or later. *Site licence: £105.*

£35.00

Notice Board

"..for rolling presentations Notice Board excels."
Acorn User

Using Draw and Artworks files **Notice Board** enables you to create multiple-page, poster-like presentations to run unattended in any location. Widely used in schools, **Notice Board** provides a colourful, constantly changing information point that is ideal for info/sales messages at conferences and exhibitions, libraries, reception areas, etc.

£35.00

Montage

Creative Fractal Art

"...decidedly the most original and unusual package I have seen for a very long time......once you've digested what the instructions say, Montage is a fascinating and enthralling program." *RISC User*

Create your own stunning fractal art pictures quickly and easily with Montage. Working in interactive mode Montage builds the images as you work. Requires RISC OS 3.1 minimum 2Mb, 4Mb for hi-res pictures.

£45.00

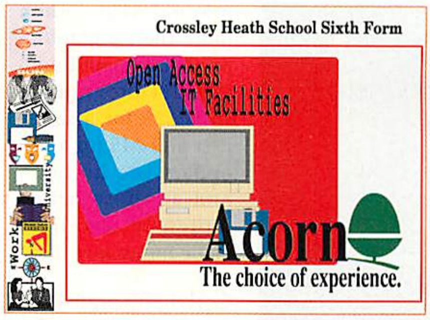
MultiLink Transfers data effortlessly between 8-bit BBC and all RISC OS 32-bit computers. Easy to use click and drag operation. *With serial cable **£29.95***

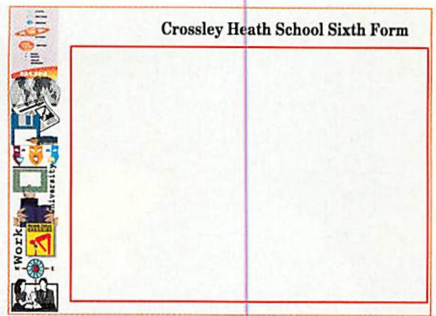
Softcrete	*Three-way program protection*	£24.95
Twilight	*Versatile screensaver*	£14.95
Notes	*The computer 'stick anywhere' notes*	£9.95
Z-Link II	*Z88–RISC OS file transfer, inc. cable*	£29.95

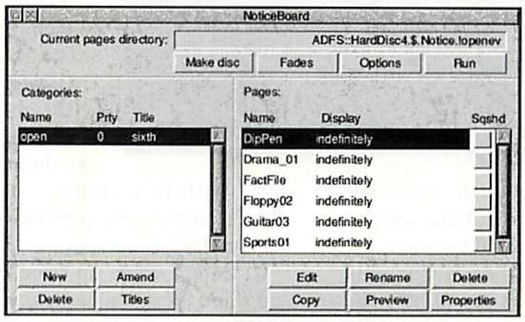
The Really Good Software Company
39 Carisbrooke Road, Harpenden, Herts. UK AL5 5QS
Tel/Fax: 01582 761 395
Email:rgsc@turnbull.compulink.co.uk

Well presented

Mike Tomkinson looks at a selection of presentation software







There are many reasons why a computer makes a particularly effective tool for presentation but essentially it is the dynamism of the system. The ability to show different eye-catching pages in a variety of ways is what good presentation software is about.

This review looks at three packages currently available for the Acorn platform; *NoticeBoard* from the Really Good Software Company, *PortFolio* from Kudlian Soft and *CableNews II* from Lingenuity. As you might expect, each has its particular strengths and weaknesses and the question you must ask at the outset is: What particular combination of features and effects do I require for my presentation?

Noticeboard

NoticeBoard was the first presentation software I got to grips with. Its user interface is somewhat quirky and it certainly took me a few reads through the accompanying tutorial before I got the hang of putting together a presentation. It's worth persevering because although *NoticeBoard* is a basic presentation package it is also very effective. The screens are produced in *!Draw* and *!Paint* which every Acorn computer has; it will also run on quite basic Acorns and from floppy disc.

In common with all three packages, the better the machine, generally the better the presentation. For example a 17in monitor wipes the floor with a 14in model.

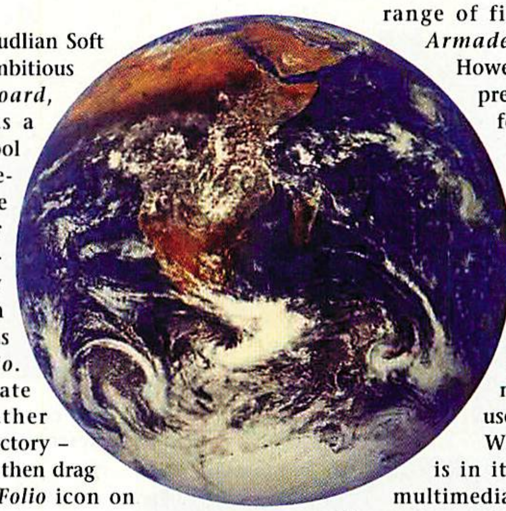
NoticeBoard allows you to create a page template with text or artwork alongside the main display area and a heading above it. This is particularly useful if you wish to incorporate the same heading or logo on every page and adds to the feeling of giving your work a distinctive house style. Your page is then simply dragged into this template.

You can do the same with the other packages but the imposition from *NoticeBoard* does force you to think more carefully about what to put in the screen space available, which it not a bad thing.

One slight quirk is that *!Draw* files must be ungrouped at this stage or they fail to appear. It is not much of a problem in practice but can cause some headscratching. A number of pages are then loaded into the editing area and the order of display, length of display and fades are chosen. As with all such software you can opt for a random display of your pages to vary your presentation.

No sound, no animation, no over-facing the user with esoteric options. *NoticeBoard* is plain and fairly simple with minimum frills but in capable hands it can create very effective and professional-looking presentations. The manual does contain a tutorial and is perfectly adequate to enable anyone to begin to explore the world of presentations. It only costs £39 and for many situations would be an ideal solution to most users problems.

Portfolio



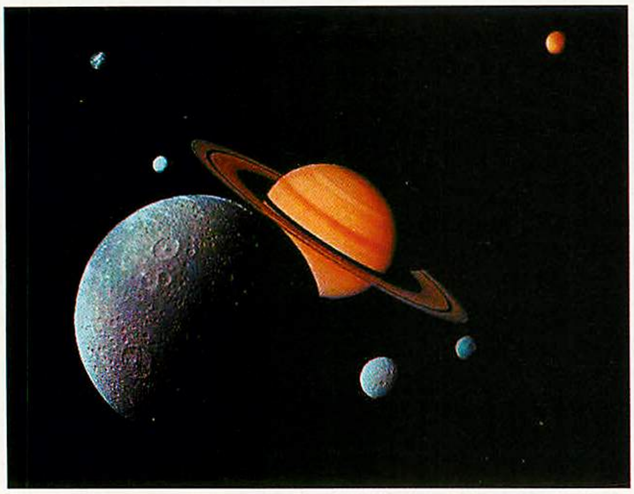
PortFolio from Kudlian Soft is rather more ambitious than *NoticeBoard*, styling itself as a media display tool that allows presentations on the computer. After using *NoticeBoard* I was very surprised with how simple it was to use *PortFolio*. You simply create your pages, gather them into a directory – squashed or not, then drag this to the *PortFolio* icon on the Icon Bar.

Your presentation will appear as if by magic. As with all such software, the hard work is in the creation of effective pages in the first place – the software cannot compensate for initial poor design. With *Portfolio* there are no unfamiliar editing screens or awkward terminology – it really is that simple. Or at least it is if you want it to be.

PortFolio can handle a much wider range of file types including *Armadeus* sound files. However, for single media presentations, it is easy for even an inexperienced user to produce the goods – your pictures are displayed in alphabetical order so it pays to give some thought to naming. As with *NoticeBoard* it also makes good sense to use *!Squash*.

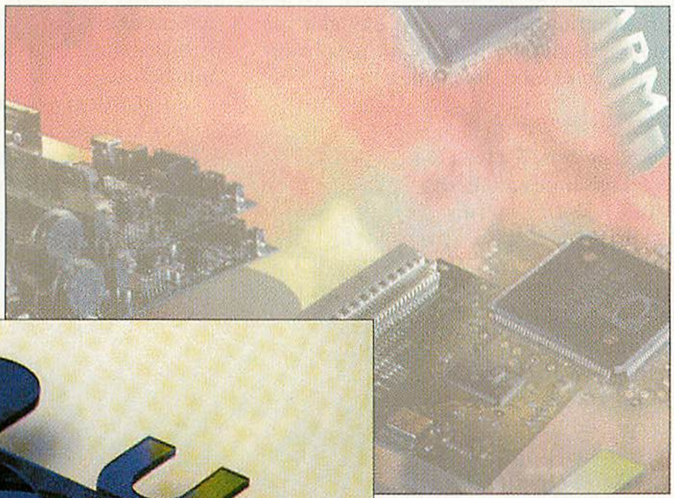
Where *PortFolio* differs is in its ability to present multimedia displays – pictures with accompanying sound. Again it is simple and relies on sound files being collected into a sub-directory and giving each file the same name as the associated picture. The sound will then play when the picture is displayed.

Of course you also have the ability to



exercise more control over the presentation than indicated above. Choices extend to deciding whether it should carousel, the type of fade, manual or automatic advance, control buttons to prompt the user, etc. The real user may wish for no more control than this but *PortFolio* provides a degree of additional control by the use of a powerful scripting language.

These scripts can be created in *!Edit* to allow the user to, for example, access sound files from a CD-ROM while accessing pictures from the hard disc. The language is not difficult and the manual with *PortFolio* is comprehensive. Copious examples are also provided on the accompanying discs and as well as these there is a wide range of additional resources, including JPEG files and artwork to help create presentations. This can be almost as important as the program – seeing what is possible in order to try to better it.



In conclusion, *PortFolio* is both capable and versatile and, as the manual says, much more than a graphics presentation and multimedia program. It costs £29 for a single user and £45 for a secondary site licence – and at those prices represents excellent value for money.

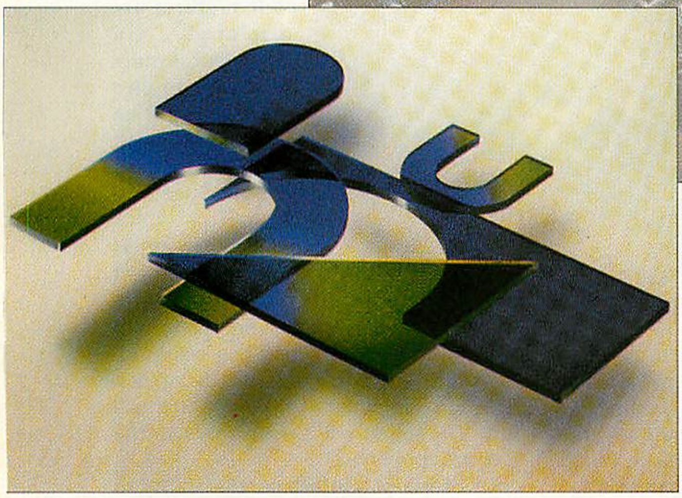
CableNews II

CableNews II from Lingenuity Software is really the big boy in this area and comes with a big boy price. It is powerful – you can do just about anything with it, including running video clips as part of your presentation as Acorn Replay files.

Slides are made up from backgrounds and there are some particularly good ones on the accompanying examples and resources discs. On to the backgrounds go frames of various types; text, graphics, Replay and hot spots.

Hot spots deserve some further explanation as they do not feature in *NoticeBoard* or *PortFolio*. A hot spot allows you to perform a particular task when it is activated – like jumping to another slide or running a video file. You can even execute BASIC programs from it.

The manual is good and it needs to be because the program, being so powerful, is not the sort that you can dive straight into



and come up with a good presentation without reference.

As such, *CableNews II* is best used when you have a specific need for a presentation which makes use of the program's particular strengths – you would probably not use it for a simple presentation. The learning curve is too steep. In terms of versatility, features, resources, examples, etc, it certainly comes out on top but not if you want a basic presentation package which is simple to use and yet offers a good balance between cost and complexity. For this requirement both *NoticeBoard* and *PortFolio* win, with *PortFolio* probably edging it by a good margin.

CableNews II could certainly take the user further but at a considerable investment in terms of time to come to grips with all the features offered. For the professional – someone whose livelihood depends on presentations – *CableNews II* would be worth that investment. Perhaps the difference between *CableNews II* and *NoticeBoard/Portfolio* is best illustrated by the price difference.

CableNews II costs £149 plus VAT for the single user version or more than five times the cost of *PortFolio*. Site licences cost £420 plus VAT for 10 users and £676 plus VAT for 30 users. For that reason *CableNews II* is probably best compared with *Freelance Graphics* for Windows from Lotus or *PowerPoint* from Microsoft on PC systems.

Here *CableNews II* wins outright in all departments and can still produce excellent presentations on basic Arcs without the high overheads of PC systems in terms of memory.

The bottom Line

All comparisons are invidious – you always end up comparing the incomparable. For a basic rolling display *NoticeBoard* will suffice. For a more sophisticated presentation, with sound and the ability to exercise more control via a scripting language, *PortFolio* comes out on top. For professional presentations, at a cost, *CableNews* II is most suitable. AU

Contact details

Product: Noticeboard
Supplier: The Really Good Software Company
Address: 39 Carisbrooke Road, Harpenden, Hertfordshire, AL5 5QS
Tel: (01582) 761395

Product: PortFolio
Supplier: Kudlian Soft
Address: 8 Barrow Road, Kenilworth, Warwickshire, CV8 1EH
Tel/fax: (01926) 851147

Product: CableNews II
Supplier: Lingenuity
Address: Wood Farm, Linstead Magna, Halesworth, Suffolk, IP19 0DU
Tel: (01986) 785476
Fax: (01986) 785460

Late Night Opening Wednesday & Thursday till 7.30pm

Open Sunday 11am to 4pm

All prices quoted Include VAT

FIRST COMPUTER CENTRE

HOW TO ORDER

Order by telephone quoting your credit card number. If paying by cheque please make payable to: "FIRST COMPUTER CENTRE". In any correspondence please quote a Phone Number, Post Code & Dept. Allow 5 working days for cheque clearance.

SHOWROOM ADDRESS: DEPT. ACU, UNIT 3, ARMLEY PARK COURT, STANNINGLEY RD, LEEDS, LS12 2AE.

LOW COST DELIVERY

- 2-4 Week Days £3.95
- Next Week Day £5.95
- Saturday delivery £10.00

Delivery subject to stock availability

- All prices include VAT @ 17.5%
- Large showroom with parking
- Multi-million pound company
- Overseas orders welcome
- Educational purchase orders welcome

OPEN 7 DAYS A WEEK

Lombard Finance available

Prices are correct at the time of going to press. Please check our latest prices before ordering. All sales are subject to our standard terms & conditions(copy available upon request). E&OE.

Telephone 0113 2319444

24 HR MAIL ORDER SERVICE FAX: 0113 231-9191

NEW! BBS Sales & Technical line TEL: 0113 231-1422

E-Mail sales@firstcom.demon.co.uk

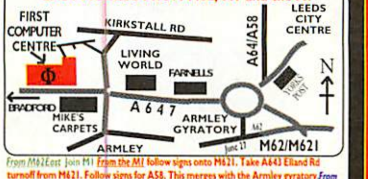
www.demon.co.uk/firstcom

AUTHORISED REPAIR CENTRE



We offer a FREE quotation on your Acorn or any peripheral (monitors, printers etc). A delivery tariff of just £5.00 is charged or alternatively you can visit our showroom. We can also arrange a courier pickup at an additional cost of £11.00.

EASY ACCESS FROM M62, M1 and the A1



From M62East Join M1 From the M1 follow signs onto M621. Take A643 Elland Rd turnoff from M621. Follow signs for A58. This merges with the Armley gyratory. From M62West Junction 27, A62 to Armley gyratory. From the A1 take the turnoff for A64. This merges with the A58 (by-passing town centre) which meets Armley gyratory.

Hardware

Acorn Risc PC's

PC700

5Mb HD540 & AKF60	£1591.95
5Mb HD540CD & AKF60	£1720.95
5Mb HD540 & AKF90	£1980.95
5Mb HD540CD & AKF90	£2110.95
10Mb HD850 & AKF60	£1979.95
10Mb HD850CD & AKF60	£2108.95
10Mb HD850 & AKF90	£2371.95
10Mb HD850CD & AKF90	£2500.95

PC600

4Mb HD540 & AKF60	£1339.95
4Mb HD540CD & AKF60	£1469.95
4Mb HD540 & AKF90	£1730.95
4Mb HD540CD & AKF90	£1860.95

Dual Speed CD drives from	£26.95
Six Speed CD drives from	£54.95
16 Bit Sound Card	£68.95
Extra Slice Case	£115.95

0% Finance Acorn **20/20 Finance**

Interest Free Credit

20% Deposit 20 Monthly Payments

PC Cards

	With Risc PC	Seperately
SX-33	£115.95	£233.95
DX2-66	£174.95	£292.95
DX4-100	£233.95	£350.95
5x86	£350.95	£585.95

Acorn A7000 Systems

A7000 2Mb HD425 & AKF60	£933.95
A7000 4Mb HD425 & AKF60	£1021.95
A7000 4Mb HD425CD & AKF60	£1139.95



Microvitec 1438 Monitor

.28 dp, Multi-Sync

Only £264.95

Software

Entertainment Software

Alone in the Dark	£25.95
Black Angel	£26.95
Cannon Fodder	£22.95
Cobalt Seed	£22.95
Cyber Chess	£26.95
Darkwood	£26.95
Fire & Ice	£21.95
Fist Lore	£21.95
FTT Formula 2000	£23.95
Global Effect	£29.95
High Risc Racing	£21.95
Lemmings/More RiscPC	£23.50
Rick Dangerous	£14.95
Saloon Cars Deluxe	£26.95
SimCity 2000 (A5000)	£32.95
SimCity 2000 (RiscPC)	£32.95
Simon the Sorcerer	£34.95
Star Fighter 2000	£26.95
The Real McCoy 2,3 or 4	£26.50
Time Machine	£16.95
Virtual Golf	£24.95
Wavelength	£19.95
Wolfenstein 3D	£25.95

Application Software

Arc Comm 2	£53.95
Arc Fax 1.12	£37.95
Arcterm 7	£65.95
Artworks 1.54	£115.95
Hearsay II	£75.95
Home Accounts	£31.95
Copernicus Astronomy	£29.95
Impression Style	£72.95
Impression Publisher	£117.95
Sibelius 6 Version 3	£174.95
Sibelius 7 Sudent ver3	£544.95
Sibelius 7 Version 3	£999.95
Titler	£83.95
Touch Typing	£34.95
Turbo DriverBJ/Eps/HP	£46.95

Educational Software

Badger Trails	£42.95
Chrystal Rain Forest	£42.95
French Learning Series	£19.50
Noddy's Playtime	£19.95
Oxford R/Tree Stage2	£39.95
Oxford R/Tree More	£39.95
Oxford R/Tree Stage3	£39.95
Rosie & Jim (Sneezes)	£11.95
Rosie & Jim (Duck)	£11.95
Talking Anim. Alphabet	£29.95
10/10 Dinosaurs	£13.95
10/10 Driving Test	£13.95
10/10 Early Essentials	£13.95
10/10 Essential Maths	£13.95
10/10 Essential Science	£13.95
10/10 English	£13.95
10/10 French	£13.95
10/10 German	£13.95
10/10 Junior Essentials	£13.95
10/10 Maths Algebra	£13.95
10/10 Maths Geometry	£13.95
10/10 Maths Numbers	£13.95
10/10 Maths Statistics	£13.95
10/10 Spelling	£13.95

10/10 Education series Any 2 for £25.95

PC CD ROM Software

Schubert	£37.95
Strauss	£26.95
Stravinsky	£37.95
Ancient Lands	£26.95
Bookshelf 96	£40.95
Dinosaurs	£26.95
Encarta 96	£39.95
Golf	£26.95
MSDOS 6.22 & Windows	£67.95
Works V3 for Windows	£26.95

Reference

Chambers Dictionary	£35.95
Grolier Encyclopedia	£15.95
Red Shift Astronomy II	£37.95

Dorling Kindesley Titles

Encyclopedia of Science	£27.95
Encyclopedia of Nature	£27.95
History of the World	£27.95
My 1st Incred. Dictionary	£21.95
PB Birthday Party	£23.95
Stowaway	£24.95
The Way Things Work	£27.95
The Ult. Human Body	£27.95
The Ultimate Sex Guide	£27.95
Virtual Reality Bird	£23.95
Virtual Reality Cat	£23.95

Top sellers on CD-ROM

Mortal Combat	£31.95
Will. Shatners TEK Wars	£26.95
Monopoly	£27.95
Command & Conquer	£32.95
Panic in the Park	£29.95
FIFA 96	£33.95
Encarta 96	£39.95
Actua Soccer	£28.95
Destruction Derby	£32.95
Hexen	£20.95
Rebel Assault	£32.95
PGA Golf 96	£33.95
Worms	£27.95

Windows 95



Microsoft Windows 95 From only £80.95

Win 95 CD	£82.95
Win 95 upgrade CD	£80.95
Win 3.1 - Win 95 upgrade	£79.95

Acorn Spares

Acorn Mouse (Original)	£29.95
A5000/A4000 Disk Drive	£81.95
A3020 Disk Drive	£100.95
A3010 Disk Drive	£100.95
A3000 Disk Drive	£81.95
RiscOS 3.11 Full Upgrade	£86.95
RiscOS 3.11 No Manuals	£43.95
MIDI Max (Risc PC&A5000)	£80.95
MIDI User (A30x0&A4000)	£56.95
MIDI Cables (2x3m)	£9.95

Repair & Fitting Service Available

2.5" H/Drives

Conner Fujitsu Seagate

80Mb 2.5" IDE	£84.95
130Mb 2.5" IDE	£99.95
170Mb 2.5" IDE	£104.95
250Mb 2.5" IDE	£109.95
340Mb 2.5" IDE	£129.95
540Mb 2.5" IDE	£169.95
A3010/3000 IDE Card*	£69.95

*When Bought With Drive

3.5" H/Drives

Quantum Toshiba Seagate

540Mb 3.5" IDE	£126.95
1.0Gig 3.5" IDE	£161.95
540Mb 3.5" SCSI	£151.95
1.0Gig 3.5" SCSI	£230.95
2.0Gig 3.5" SCSI	£345.95
A3/A400 IDE Card	£80.95
A5000 2nd H/Drive Kit	£19.95

Memory Modules

RiscPC/A7000 4Mb	£29.95
RiscPC/A7000 8Mb	£54.95
RiscPC/A7000 16Mb	£119.95
RiscPC/A7000 32Mb	£239.95
RiscPC VRAM 2Mb	£169.95
With 1Mb Trade In	£122.95
A3000 1Mb to 2Mb	£65.95
A3010 1Mb to 2Mb	£44.95
A3010 1Mb to 4Mb	£99.95
A3020/A4000 2-4Mb	£81.95
A5000 2Mb to 4Mb	£72.95

Part X. your old Memory Call....

Printers

Canon

Canon BJ30	£141.95
Compact Portable mono printer, 30 page ASF built in.	
Canon BJC70Colour	£187.95
High quality Portable colour printer, 30 page ASF.	
Canon BJ210	£149.95
Mono Printer, 720x360dpi, colour upgradeable.	
Canon BJC4100Colour	£229.95
High quality colour, super fast mono printing 720 dpi.	
Canon BJC610 Colour	£357.95
New Enhanced, dedicated colour printer, 720x720 dpi.	
Canon LPB 460	£279.95
Windows PC compatible only, GDI Laser printer.	

Hewlett Packard

HP600	£181.95
Colour upgradeable mono ink jet/ Col. Kit £23.80	
HP 660 Colour	£280.95
New colour inkjet from HP.	
HP 5L laser printer	£409.95

Epson

Epson Stylus 500	£287.95
720 dpi, 100 sheet ASF, full colour printer	
Epson Stylus Colour IIs	£176.95
720 dpi, 100 sheet ASF, colour or mono printer	
Epson Stylus 820	£138.95
720 x 720 dpi, Mono printer, upgradeable to colour	

Citizen

ABC Colour printer	£129.95

simple (as easy as ABC) to use 24 pin printer. Comes as standard with 50 sheet Auto sheet feeder. Tractor feed optional at £34.95

OKI

OL600ex	£374.95
LED laser printer, 6 p/p/m, 1Mb of Ram.	
OL610ex	£476.95
LED laser printer, 6 p/p/m, 2Mb of Ram.	

Star Micronics

Star LC90 9 pin mono	£79.95
9 pin mono printer, ASF built in, push tractor optional.	
Star LC240 24 pin mono	£93.95
24 pin mono printer, 192 cps draft, with ASF built in.	
Star LC240C 24 pin Colour	£108.95
24 pin colour printer ASF built in, 4 LQ fonts.	
Star SJ144 Colour	£183.95
Stunning affordable colour thermal transfer printer, low running costs, 3 p/p/m mono, 1.4 p/p/m colour.	

Accessories

Printer Switch Box 2 way	£12.95
Printer Switch Box 3 way	£17.95
Printer Stands (Universal)	£4.95
1.8 Metre printer cable	£4.95
3 Metre printer cable	£6.95
5 Metre printer cable	£8.95
10 Metre printer cable	£12.95
SCSI Internal Cable	£8.95
SCSI Cable 25D-50Cent	£9.95



MULTI COLOUR Disk labels

500 £6.95

1000 £9.95

Re-Mark-It disk labels x10	£2.45
10 Capacity box	£0.95
50 Capacity lockable box	£3.95
100 Capacity lockable box	£5.95
*90 Capacity Banx box	£11.95
*150 Capacity Posso box	£20.95
100 Capacity CD holder	£4.95

*add £3.00 delivery if purchasing just one Posso or Banx box. Normal delivery when purchased with other product or when buying 2 or more.

Multi Media/CD ROM

Delivery £1.18 per title or £3.95 for 4+

RISCPC's (RISCOS 3.6 only)

8x Goldstar R580B	£96.95
6x Goldstar R560B	£64.95
4x Goldstar R542B	£39.95

Dual IDE cable £9.95

RISCPC's (RISCOS 3.5 only)

8x Optics Stingray	£93.95
6x BTC CD drive	£54.95

Comes with software driver disk

Dual IDE cable £9.95

CUMANA

Indigo CAA340i Quad Speed CD Drive	£170.95
Indigo CAA340ia Quad Speed CD Drive	£229.95
Indigo CAA300i Dual Speed CD Drive	£134.95
Oscar (Parallel) 4 Speed CD Drive	£222.95

Acorn CD Software

APDL Clipart DTP 1	£18.95
APDL Clipart DTP 2	£18.95
Artworks	£129.00
Artworks Clipart 1/2	£20.95
Cars-Maths in Motion	£58.95
Childrens Micropedia	£87.95
Creepy Crawlies	£55.95
Dune II	£41.95
Goldilocks	£45.95
Grannys Garden	£34.95
Hutchinsons Encyclopedia	£31.95
Oxford Reading Tree	£39.00
PDCD 1 (Datafile)	£24.95
PDCD 2 (Datafile)	£24.95
PDCD 3 (Datafile)	£24.95
PDCD 1 (APDL)	£14.95
PDCD 2 (APDL)	£14.95
Simon the Sorcerer	£41.95
Photobase Landscapes	£55.95
Understanding the Body	£50.50

Modems

SupraFAXModem · US Robotics

Sportster Vi



- Class 1 Fax
- Personal Voice Mail
- Fax on Demand
- Call Discrimination

BABT Approved

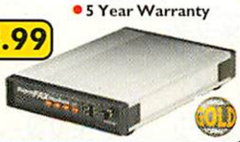
- 14,400 Data/14,400 Fax £98.95
- 33,600 Data/14,400 Fax £161.95

SupraFAXModem 33.6

- Up to 115,200bps (v42bis)
- Silent & Adaptive Answer
- V34 Standard
- Class 1 & 2 Fax
- Unique LCD Display
- Flash ROM
- 5 Year Warranty

only £188.99

Computer Shopper Best Buy



SupraExpress 288

Only £153.95



- Up to 115,200bps (v42bis)
- LED Display
- V34 Standard
- NComm Software
- Class 1 Fax
- 5 Year Warranty

Supra modems are not BABT approved, however they perform as well & often out perform BABT approved modems. Supra Modems have a 5 year limited warranty

Superb Price/Performance

PRIMA V34 Fax Modem

28,800 Baud Rate, BABT Approved

Connecting cable and Comms Software Provided.

Only £115.99

Consumables

Ribbons

Citizen Swift/ABC mono	£3.95
Citizen Swift/ABC colour	£12.95
Star LC90 mono ribbon	£4.95
Star LC10/100 mono	£3.65
Star LC10/100 colour	£7.95
Star LC240c colour	£13.95
Star LC240c mono	£8.95
Star LC240 mono	£5.95
Star LC24-10/200/300 Colour	£13.95
Re-Ink Spray for mono ribbons	£11.95

MOST OTHER MAKES AVAILABLE

PREMIER-INK Cartridge Refills

Save a fortune in running costs with your ink/bubble jet. Compatible with the HP Deskjet series, Canon BJ10/20/80/130/200/300/330, Star SJ48, Citizen Projet and many others. Full range of colours available.

Single refills	(22ml)	£6.95
Twin refills	(44ml)	£12.95
Three colour kit	(66ml)	£19.95
Full colour kit	(88ml)	£27.95
Bulk refills	(125ml)	£24.95

Printer repair specialists call for quote

Ink Cartridges

Canon BJ10/Star SJ48	£17.95
Canon BJ200/230	£18.95
Canon BJ30 (3 pack)	£12.95
Canon BJC 70 mono (3 pack)	£10.95
Canon BJC 70 colour (3 pack)	£17.95
Canon BJC 4000 colour (single)	£16.95
Canon BJC 4000 mono (single)	£6.95
Canon BJC 4000 mono high cap.	£28.95
Canon BJC 600e mono high cap.	£8.45
Canon BJC 600e colour	£7.95
Citizen Printiva Std. colours	£6.45
Citizen Printiva Metallic colours	£16.45
HP. Deskjet 500/550 Mono	£22.95
HP. Deskjet 500/550 Colour	£24.95
HP. Deskjet 660 double mono	£23.95
HP. Deskjet 660 colour	£25.95
Epson Stylus mono	£13.95
Epson Stylus colour	£27.95
Epson Stylus Col. II/S/820 Mono	£17.95
Epson Stylus Col. II/S/820 Colour	£24.95
Star SJ144 mono/colour (single)	£8.95

Paper

Fanfold (tractor feed) 500 sheets	£6.95
Fanfold (tractor feed) 1000 sheets	£12.49
Fanfold (tractor feed) 2000 sheets	£21.49
Single sheet 500 sheets	£6.95
Single sheet 1000 sheets	£12.49
Single sheet 2000 sheets	£21.49

Disks



Bulk DSDD

10 x £3.45	100 x £26.95
30 x £9.95	200 x £49.95
50 x £14.95	500 x £114.95

Branded DSDD

10 x £4.95	100 x £41.95
30 x £13.95	200 x £76.95
50 x £21.95	500 x £175.95

Bulk DSHD

10 x £3.95	100 x £29.95
30 x £10.95	200 x £55.95
50 x £16.95	500 x £129.95

Branded DSHD

10 x £5.95	100 x £44.95
30 x £15.95	200 x £82.95
50 x £23.95	500 x £189.95

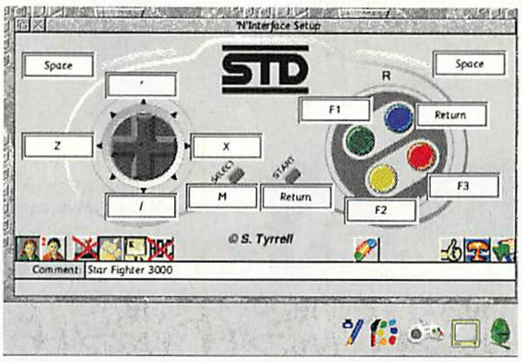
Disk labels x500 £6.95

Disk labels x1000 £9.95



Oh what joy

Mike Cook plugs in for better gameplay



Stuart Tyrrell might be a familiar name to you although you may not be able to place it. Stuart started by producing a sequence of impressive demos complete with sound. In fact, for a long time he was my son Alec's programming hero, whom he has longed to emulate. Stuart has now graduated from university and is turning his talents to hardware add-ons. The latest is the 'N interface' which allows owners of bidirectional printer ports to add a joystick or quickshot games pad to help in the playing of their favourite games.

Like all such products for Acorn computers it consists of hardware and software. The hardware is easy enough, and comes in three parts. A box with a 25-pin plug and socket connects to the printer port and allows a printer or a dongle to be attached at the same time. From this box comes a permanently attached cable leading to a small black plastic box with two Nintendo type plugs on it and a large push switch.

Into this you plug a joystick or games pad. The only snag here is that there is no label telling you which plug is joystick 1 and which is joystick 2. The push switch is labelled indicating normal printer function with the switch out and joystick mode with it in. The hardware is made to a good quality, but has a little of the home-made look about it – but you want it to work not to look at.

So far so good, but as Acorn computers and most games that run on them were not designed to be used with a joystick there needs to be some sort of software patch for tricking the computer into thinking the keyboard or mouse is being used.

This is where Stuart's expertise with software shines. The desktop application *!N-Interface* allows easy setup and recall of key sets to match any game.

There is a folder of 30 pre-configured games sets – a good place to start if your favourite game is not among them. Each key on the games pad or joystick can be assigned to any keyboard key. This can be set up for either of the two joysticks that N-Interface supports. You can choose the way the joystick behaves, either as a standard Acorn joystick or, if your machine has one built in already, as joysticks 3 and 4.

In addition you can choose whether the key emulated goes into the keyboard buffer or not. Finally you can choose whether the direction pad or joystick emulates the mouse.

There is a 'remap' button which brings up another window. This is used when you are playing games in a joystick mode and there are also keyboard controls. You can remap any key on to any joystick button. So, for example, you can map the R key to fire button 1.

The controls seemed to be quite comprehensive, so how did it fare in practice? It wasn't possible for me to test it with all games on the market just as the manufacturers can't, so I had to take a sample and see what happened: I found the mouse emulation a little unresponsive but this was greatly improved by increasing the response speed of the system.

Unfortunately this made the system too fast for my taste as I like my mouse on the next to the lowest speed. This meant making two changes when I wanted to emulate the mouse – a minor consideration but slightly irritating.

Most of the games I tried did work correctly and using a games pad certainly made them very much easier to play as well as reducing finger strain. However, some games do produce 'funnies'. For example, *Galactic Dan* works except for the right movement control and the game thinks that the Shift key is permanently pressed. Fortunately software upgrades are free and I am sure these inevitable teething problems will be ironed out in time.

In conclusion, I found that the hardware is well made but not slick looking and software performs on the majority of major games. The use of a games pad greatly improves the enjoyment and responsiveness of games play. AU

What Alec (14) says:

'N' Interface is the new revolutionary 'Super Nintendo' style joypad that is compatible with any Acorn machine. Its slick, professional complexion would be the envy of every Acorn user. The interface sits neatly on your desk and a mere push of a button can swap between the activation of the printer or the device.

The plug screws neatly into the back of your computer and the printer lead fits into the back of that. It's an indispensable asset for anybody who knows anybody who likes playing games.

Product details

Product: 'N' interface
Type: Joystick interface
Requirements: Bi directional port
Produced by: Stuart Tyrrell
Address: PO Box 183, Oldham, OL2 8FB
E-mail: info@stdevel.demon.co.uk
Price: £24.95 incl P&P

GAME SHOW

Welcome once more – we'll kick off this month with a continuation of Paul Taylor's chronicles of the construction of *Marsquake* – a game that should turn out to be the definitive Acorn *Bomberman* clone when it's complete.

Life on Mars

Last time, I finished my narrative of the early days of *Marsquake* by describing the way that exploding bombs can cause chain reactions – creating the all-too familiar phenomenon that's one of the hallmarks of *Bomberman*.

At the moment, the chain reactions are a little too slow, as you can run along leaving a trail of bombs behind you, which explode just a few tiles down the line without causing you so much as a heat rash. Really, this chain reaction should catch you up, and – well, let's leave that to the imagination.

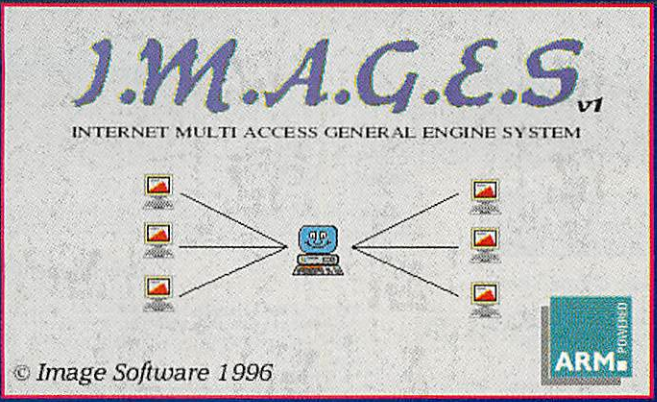
Once a bomb has exploded, I delete it from the list of currently active bombs. From now on, the explosion is handled by another part of the program – the grid scan. This checks every tile on the map every frame and updates its information according to its nature. When the grid scan comes to a tile with an explosion that's in progress, it increments its animation frame until the detonation is complete and the flames have died away – the tile is then returned to its original state.

As far as the graphics code is concerned, there are two types of explosion tile. One takes the form of a square floor tile with the explosion drawn directly on to it – this is fine if the original tile under the epicentre of the blast was a plain section of floor, but if the explosion occurred over a special tile such as a conveyor, it would obscure the proper floor tile for the duration of the blast and the conveyor would mysteriously disappear for a moment. The second type of explosion graphic is an overlayed sprite, which when plotted allows you to see through it to the floor tile underneath. However, the overlay routine is slower due to the fact that it needs to mask through the background, so it is only used when necessary.

Finally, I've added a second fire button control to allow you to stop rolling bombs that you've just pushed. The trouble is, you can't just stop the bomb dead as soon as the button press is detected, even if you lock the bomb to the nearest tile there and then. This is because the bomb movement code does a lot of intricate 'messing about' with the map data to record the bomb's position, which may become incorrect if anything else directly changes the position or the movement of the bomb. Hence, the button press registers a '*stop as soon as possible*' message with all the bombs that the player has just pushed. The bomb movement code will then deal with this itself when it's ready.

Hopefully, this should have brought you up to speed with the progress I have made on *Marsquake*. I'll be tackling explosions through the pipe networks in the near future as well as adding some larger explosions – and maybe even a flour bomb or two.

That's all from Paul for now, but I'll keep you updated with news of *Marsquake*'s progress, and I hope to feature more of Paul's diaries soon.



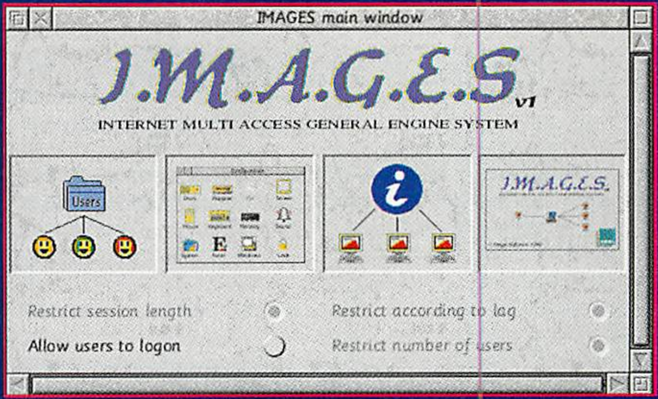
Multiple images

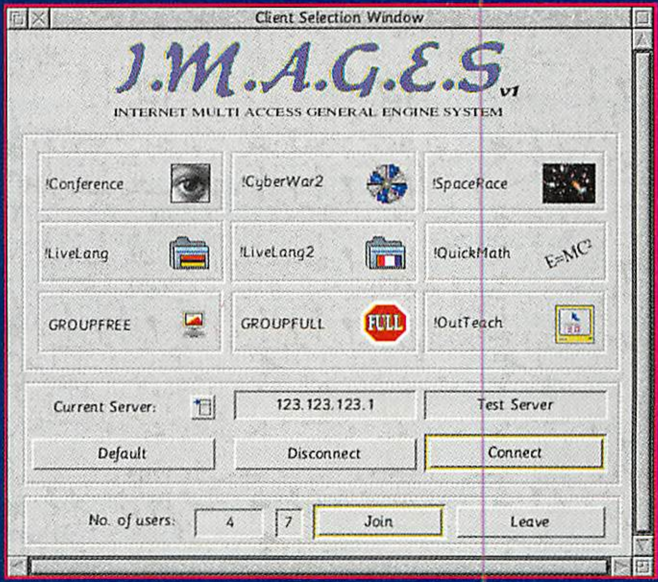
As many of you will know, I have something of a penchant for multiplayer and network games – it's been a constant source of disappointment to me that we've so far missed out on the multiplayer craze that's hit the other platforms. The network capabilities of games such as *CivNet* (a version of the enthralling strategy game *Civilisation*) and the mindbending eight-player *Quake* have increased the playability and longevity of these titles by an order of magnitude. If you've stretched your processor to the limits, adding the multiplayer dimension is an excellent way of boosting a game's addictive powers.

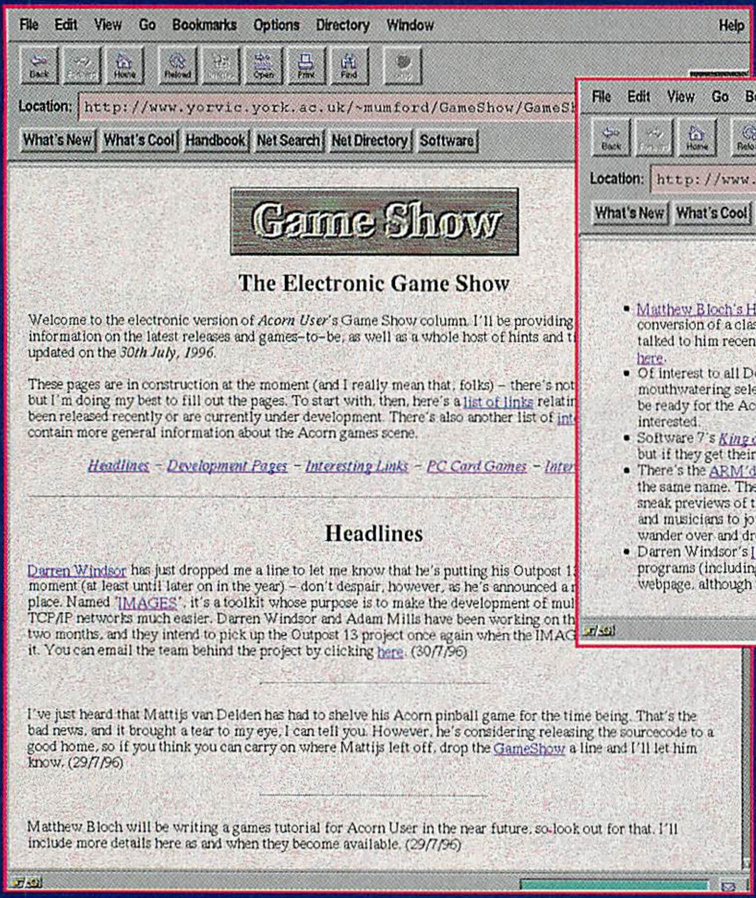
As I said, up until now we've missed out. Please welcome Image Software to the scene – Darren Windsor and Adam Mills have a package that could jolt the Acorn games scene with a new lease of life. IMAGES (the *Internet Multi Access General Engine System*, as I'm led to believe) promises to provide a powerful interface to any TCP/IP network, allowing multi-user software to be written easily. IMAGES is compatible with various TCP/IP stacks including Acorn's own version as well as FreeNet. Users of the *Voyager* package will be pleased to hear that they're catered for too.

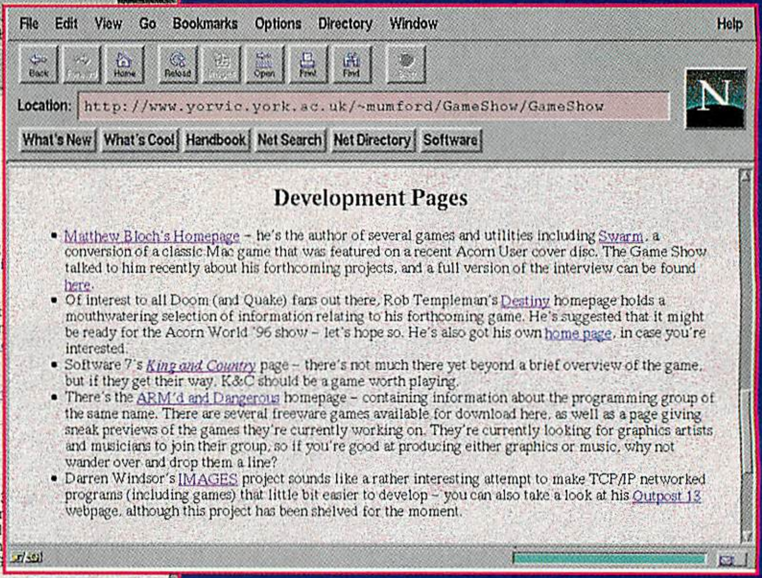
IMAGES is based round a server-client structure, and once you've got your server set up, anybody with the client software can join a group on your system and, as long as they've got the appropriate software installed, start interacting with other users in that group – although the package isn't specifically aimed at the games market, it's probably what a lot of people will have in mind.

Time will tell whether the system is flexible and powerful enough to cope with the likes of complex *Doom* style games, but Darren has his own plans for a networked three-dimensional game named *Outpost 13* – devel-









opment of which will continue as soon as IMAGES has been completed.

IMAGES is due to be released this autumn, and extensive details of the SWIs needed to develop networked software are available from Image Software. For more information, take a look at *http://www.argonet.co.uk/image* or e-mail *image@argonet.co.uk.*

Pass the electrodes

What with the proliferation of free web space bundled with an Internet account from various service providers, it seems to be a growing trend for people to set up their own personal repositories of information ranging from games reviews to hints, tips and cheats. I've been meaning to electrify the Game Show for some time, and I'm pleased to announce that the process is well under way. It's not quite ready for human consumption as I write this, but I'll broadcast the official URL as soon as the site's been polished.

My first request, therefore, is to ask you to send in any links to interesting pages you might have seen, whether they happen to be your own, or ones you've stumbled across while browsing the Net. From gaming strategies to programming techniques, send them all to *augames@idg.co.uk.*

I think we'd be missing an opportunity if the Electronic Game Show was just a collection of worn links, so let me know what you want to see within its pages, and what services you want it to provide. I'm keen on creating a forum that allows everyone to contribute towards the production of games, whether they're coders, artists or designers. With a little luck, that'll be appearing in the near future, but if there's anything else you think the page could offer, just drop me a line.

And finally

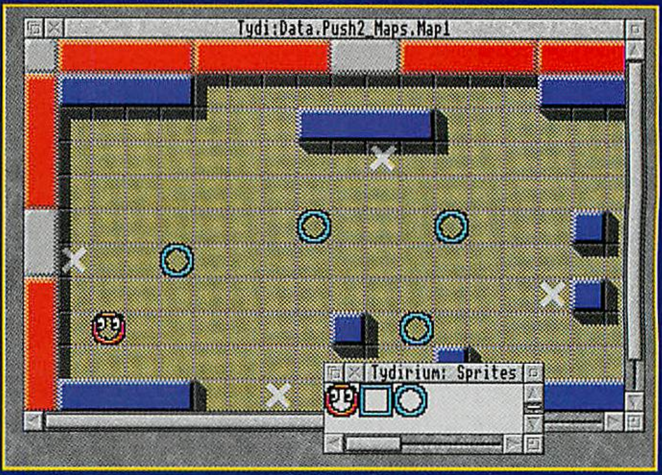
Chris Gilbert's been overcome with the desire to write a strategy game to match the likes of *Civilisation II* – it's been designed to run in the desktop and, although there's not much to see at the moment, Chris is eager to talk to graphics artists and musicians with a view to forming a group to tackle the project. If you'd like to lend a hand, or you have some ideas you'd like to see included, drop me a line here at the Game Show and I'll pass your messages on.

Robert Templeman's game *Destiny* is coming ever closer to completion and as I speak a playable demo is being prepared. One of Robert's main concerns is compatibility with the StrongARM processor, so the final release date might well be influenced by the availability of the processor cards, but if the net gossip is anything to go by, it should cause a stir when it does hit the streets.

R. Fred Williams has released an alpha version of *Tydirium*, a game map editor that's designed to allow you to alter *Pushy II*'s maps. Create your own levels. Be the cause of your friends' frustration. It's also adaptable to any two-dimensional map system, so if you're writing your own game that needs a few levels, you might want to take a look at Fred's utility. His homepage is at http://www.argonet.co.uk/users/rfredw/ and the program is available there.

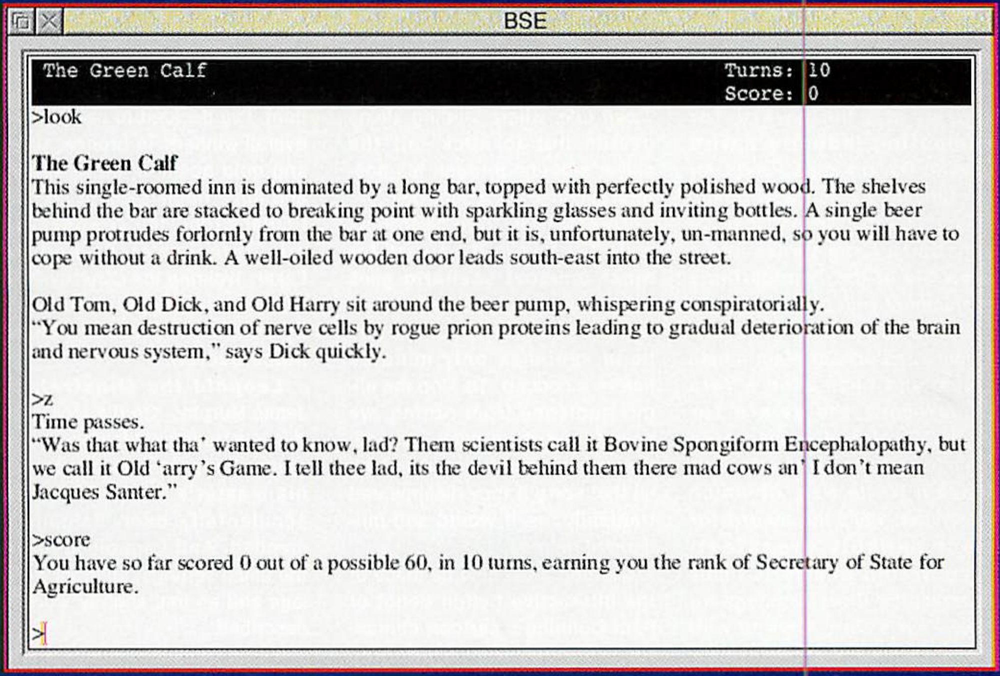
Thanks to all the people who've been helping me build up the *Electronic Game Show*; I'll let you know how it's developing next month – until then, keep playing.

Steve Mumford



The 1996 Interactive Fiction Competition

Graham Nelson unveils the results



The winner: *BSE* by Chris Smith

Over the last few months, this column has been running one of the most ambitious competitions *Acorn User* has held – asking readers not to solve a puzzle or put in for a draw, but for a tremendous amount of work and effort, to write an entire finished game. At first Steve Mumford and I exchanged some pretty nervous e-mails – would we get any entries? Had we bitten off more than you could chew? Then the envelopes began to arrive, from Jersey to Dundee and beyond (Colorado and even antipodal Tasmania). There's no space here to mention every entry, but every one was played through and enjoyed.

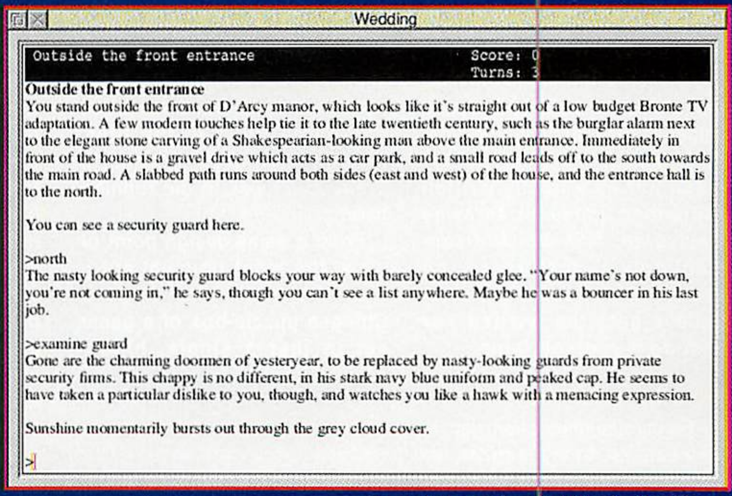
Briefly, the rules were to write a short adventure game, on any theme, which could be run under RISC OS. All the entrants more or less agreed about what 'short' meant, and each entry could be played through in one Sunday afternoon given enough inspiration.

Three different adventure-design systems were used – *Inform*, *Trellis* and *ALPS*. (Future columns will, I hope, review two new systems becoming available under RISC OS, so the choice will expand.) A few brave souls wrote 'by hand' using BASIC or C, and some of the games had a look-and-feel like early BBC Micro adventures, but that didn't go against them. The most popular design system was *Inform*, though many users are still working with the early *Inform 5* release on the September 1994 cover disc, rather than *Inform 6* that appeared on the most recent cover CD.

Our winners will also be appearing on *Acorn User* discs: watch this space.

The composite Acorn user's bedroom

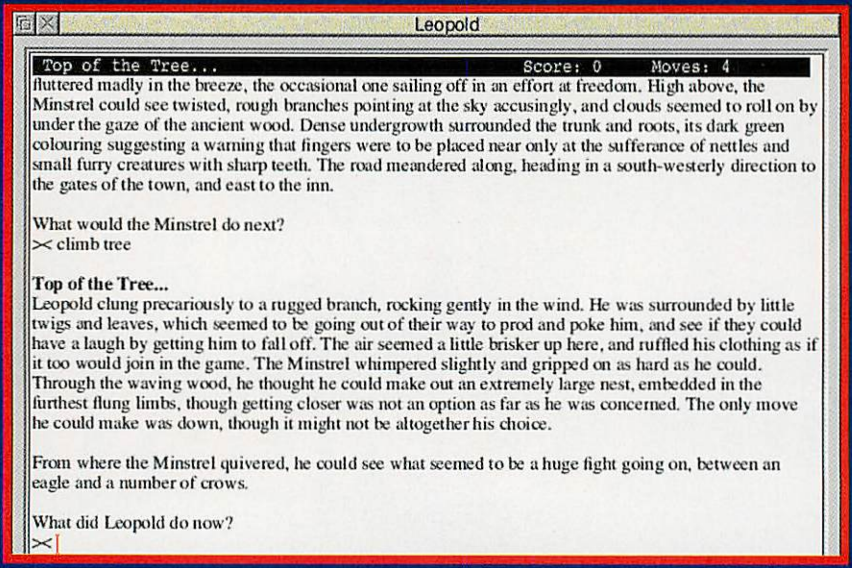
Almost half the entries were set in seemingly ordinary suburban houses. Occasionally spaceships, trolls or enigmatic women wrapped only in towels would appear on the upstairs landing, these being no doubt equally



Second place: *The Wedding* by Neil Brown

likely contingencies in real life. Still, puzzles would usually centre on getting out of the house. So I've now played this scenario over and over, and can exclusively reveal that none of us has a tidy bedroom, and all of us have quilts or other debris covering up an Acorn computer.

Modestly, the Acorns tended to be older models, A3010s and earlier. I wonder if anyone has carried out a reliable census of Acorn models still in use? In this highly unscientific survey, I certainly would have expected more post-3000s. Acorns were not the only computers to appear, and the **award for computing industry satire** goes to David King's *Panda*, for the Sinclair ZY-96 pedal-driven laptop, and the 'Tracey' application, which turns sprites into a Draw file of the Thunderbirds character of your choice.



Third place: *Leopold the Minstrel* by Jamie Murphy

CD-ROMs came up in several games, and so did plain music discs, and once even a Vera Lynn record: the **award for best CD-related puzzle** goes to Jonathan Nowell, for *Black'n'White Rag*, of which more later; while the **award for most unlikely breakfast-preparation puzzle** is richly deserved by Chris Armitage for *New Year's Day*. Anyone who thinks cornflakes an elementary recipe has evidently never stayed in the Armitage household.

The other popular activity was parachuting on to an office block and breaking in through the roof, with a clue generally to be found hidden in the toilets. In this category, Damian Le Gresley's *MFI* stood out as a neatly-written espionage game in faraway Zlavisgrad. *MFI*, which disappointingly features no self-assembly furniture, nevertheless gets the **award for best do-it-yourself lamp.**

Strange new worlds

No purely science-fiction games were entered, to my surprise, so the **award for close encounters of the third kind** goes to Nick Rice's engaging account of *Town Life*, where landing aliens decide not to suck out the player's brains through his nostrils 'because it's a Saturday'.

To get away from bedrooms and office blocks, the **award for most unusual scenario** goes to Mark Randall's *Fake Pratt!*, in which the eponymous all-boy band vanishes only minutes before a concert. To stop the all-girl audience from rioting, we have to get them back... though the management would not be all that sorry if they disappeared tragically, as it would sell millions of records.

Mention must also be made of the interactive fiction debut of Paul Dunning's cartoon character, *Simon the Siphoning Squirrel*, and of Paul O'Brian's unusual twist on the fantasy-quest game, in which sinister magic is gradually transforming the limbs of the population into animal-parts. *Wearing The Claw* also wins the **award for best end-game twist in the plot,** though Andrew Laker's *Transporter* was in the running here.

From a game-design point of view, the most unusual entry was *Black'n'White Rag*, a Chinese puzzle-box of a game set in just a single, highly detailed location.

And the winners are...

In honour of the Olympics (and if beach volleyball is an Olympic event, why not interactive fiction), I've decided to name three overall winners, in bronze, silver and gold position, so to speak, and three runners-up. In no particular order, the **runners-up** are: *Transporter*, by Andrew Laker; *Wearing the Claw*, by Paul O'Brian; and *Black'n'White Rag*, by Jonathan Nowell. In **third place overall:**

Leopold the Minstrel, by Jamie Murphy. On the face of it, this is a traditional fantasy-quest game: Leopold was out to get his master's lute, which had accidentally been damaged, mended. And Leopold went to the usual settings, such as a village and an inn, slightly wordily described.

It's an unusually atmospheric tale, though, written with meticulous care. It seemed to me to have a Welsh flavour: perhaps so, since the author hails from Carmarthen. And almost unique about *Leopold* is that it is told in the third person and the past tense, which must have involved the author in a major rewrite of the Inform system libraries. (Only almost unique: Infocom's rather poor late game, *Journey*, is also in the past tense.)

For example, in reply to 'climb pillar': 'Leopold looked at both pillars carefully, gauging their climbability. He rubbed his chin, nodded several times, chuckled twice, and didn't bother.'

The Wedding, by Neil Brown, lies in **second place** overall. A wry satire set in the bride's family house, after the groom has apparently run off hours before the service, *The Wedding* has elegant puzzles and a strong stock of characters. (The setting is somewhat in the 1990s style typified by *Curses* and *Christminster.*) There's the chef whose hat is 'like an elongated white mushroom', Chloe the goth, a golfing uncle and so on. And *The Wedding* also wins the **award for best room description,** for this opening sentence: 'Should Luxembourg ever suffer a famine, they need only raid this pantry.'

All in all, *The Wedding* is a treat from start to finish, and deserves to be played: I hope, like all our winners, it will make it on to the Internet archives.

In first place

Our overall winner is also a comedy, set this time in the Yorkshire Dales village of Skebdale. ***BSE,*** by Chris Smith, sends in the player as an environmental health officer to investigate a local epidemic of mad cow disease, and 'if possible... allegations of widespread devil worship in the Skebdale area'. A mixture of Dennis Wheatley, James Herriot, Ian Fleming and reports by the Veterinary Advisory Committee, this is a truly inspired game, from the helpfully supplied history of Skebdale (ancient times up to 1650) to a sound-effect-producing water pistol.

It's easy to pour scorn on this government over beef, but that's no reason not to, and in *BSE* a score of 0 out of 60 achieves the rank 'Secretary of State for Agriculture'. And there's the **award for best locked door,** a heavy incentive to keep the Country Code, a well-written hailstorm and much more.

Original and fun, *BSE* and these other fine games have made the competition a pleasure to judge. To all those who entered, I salute you. Though you might want to tidy your bedrooms.

HOW GOOD IS YOUR GRAPH DRAWING PACKAGE?

Does it support OLE for the latest DTP packages?
Is it simple to mix different graph types?
Has it got extensive presentation controls?
Can you put text anywhere you want?
Are key areas fully under your control?

We could go on for much, much longer, nag about shadow effects, backdrops, automatic table generation etc... Why not contact us for full details of...

Acorn World Stand 114

GraphMate

Presentation graphics without tears.

GraphMate costs £45 for a Single User pack, p&p included.

TableMate

The Ultimate Table Editor! **Designer**

Coming for Acorn World '96!

- Variable fonts inside cells
- Super- & sub- scripts, bold and italic effects
- Export/import HTML tables for the Internet
- Yet more line and row controls!
- Global cut-and-paste
- Buy TableMate 3 now - upgrade later and save money!

-DiagramIt-

Diagrams of all sorts - in a flash!

- Flowcharts, organisational charts, annotated diagrams spider diagrams, process diagrams - and more!
- Automatic connection of symbols using Artificial Intelligence
- Full colour control, word wrapping and graphic scaling

The fastest, easiest and most powerful way to create all those time-consuming structured diagrams - now improved!

Single User - £50. TableMate 3 User - £45.

TableMate 3

"Possibly an essential purchase"
"I would recommend this package to anyone"
- TableMate 2 & 3 Reviews, Archive May 95/Feb. 96



- Buttonbar • Simple spreadsheet facilities
- Vertical joining of cells, vertical tabs
- Extended import & export ... and much more!

TableMate is simply the most comprehensive tablemaking package available - nothing else comes close.

Single User £34-50; Upgrade from Style/Publisher £19-50

DALRIADA DATA TECHNOLOGY
74 Greville Road, WARWICK, CV34 5PJ.
Phone/Fax: 01926 492459
e-Mail: dalriad.demon.co.uk
WWW: http://www.dalriad.demon.co.uk/

CTA DIRECT

Mail Order Specialists

Curriculum Training Associates
34a Coach Road
Astley
Tyldesley
M29 7ER

EMAIL: sales@cta.u-net.com http://www.u-net.com/~cta **Tel - 01942 511000** Fax - 01942 749325

17" Monitor for ALL ACORNS only £489.00 + VAT : 540HD 3.5" only £110.00 + VAT

MONITORS

	Ex. VAT	Inc. VAT
14" SVGA Monochrome	£69.00	£81.08
14" SVGA 0.39 Colour	£149.00	£175.08
14" SVGA 0.28 MPR2 Colour	£165.00	£193.88
15" SVGA 0.28 MPR2 Colour	£198.00	£232.65
17" SVGA 0.28 MPR2 Colour	£425.00	£499.37
17" Multisync 0.28 Colour	£489.00	£574.58
29" SVGA Colour w/spkrs	£984.00	£1156.20
(AKF50) Multisync 0.28 Col	£239.00	£280.83
(AKF60) SVGA Hi Res Colour	£165.00	£193.88
Multisync A300/3000 cable	£9.80	£11.52

Desktop FAX MODEMS

	Ex. VAT	Inc. VAT
28800 non- BABT	£99.00	£105.75
28800 BABT inc line splitter	£115.00	£135.12

Powered Speakers from 50W @ £20.00 inc, 60W £25.00 inc, 80W £29.00 inc, 320W £45.00 inc.

	Ex. VAT	Inc. VAT
Acorn Original Mouse	£25.00	£29.38
Acorn ReplacementMouse	£12.00	£14.10

HOW TO ORDER

BY MAIL or PHONE: Cheques or P.O.s should be made payable to 'CTA DIRECT'.

CREDIT CARD / SWITCH please give name, address, tel. no, card no, expiry date, issue no. if any.

BY EMAIL: sales@cta.u-net.com

OFFICIAL ORDERS by MAIL or FAX

Carriage charges inc. insurance & packaging charged at cost — Small items £5.00, Large items £10.00

All prices are correct going to press. E&OE

Goods are guaranteed but not supplied on approval.

HARD DRIVES

Bare drives	Ex. VAT	Inc. VAT
170Mb 2.5" IDE	£79.00	£92.83
250Mb 2.5" IDE	£89.00	£104.58
350Mb 2.5" IDE	£110.00	£129.25
540Mb 2.5" IDE	£149.00	£175.08
540Mb 3.5" IDE	£110.00	£129.25
1Gb 3.5" IDE	£132.00	£155.10
1.7Gb 3.5" IDE	£158.00	£185.65
2.0Gb 3.5" IDE	£197.00	£231.48
540Mb 3.5" SCSI	£135.00	£158.63
1Gb 3.5" SCSI	£184.00	£216.20
2Gb 3.5" SCSI	£295.00	£346.63
4Gb 5.25" SCSI	£525.00	£616.88

HARD DRIVE interfaces

		Ex. VAT	Inc. VAT
A3000 or A3010	IDE I/F	£65.00	£76.38
A310/A400/A5000	IDE I/F	£65.00	£76.38
A30X0	SCSI I/F	£89.00	£104.58
A300/400/5000	SCSI I/F	£99.00	£116.33
RISC PC	SCSI I/F	£99.00	£116.33

THE BEST! PRINTER PRICES

	Ex. VAT	Inc. VAT
Canon BJ30 portable inkjet A4	£134.00	£157.45
Canon BJC 210 col capable A4	£141.00	£165.68
Canon BJC 4100 colour A4	**£195.00**	**£229.12**
Epson Stylus 820 mono A4	£134.00	£157.45
Epson Stylus Colour IIs A4	£165.00	£193.87
E Stylus 1500 Col capable A2	**£595.00**	**£699.12**
HP 600 Colour Capable A4	£155.00	£182.12
HP 660 Colour A4	£238.00	£279.65
HP 850 colour A4	£340.00	£399.50
HP LASERJET 5L	**£349.00**	**£410.08**
9 pin 132col mono dot matrix	£69.00	£81.07

We supply all Canon, HP &Epson ranges please ask

CD-ROM DRIVES

	Ex. VAT	Inc. VAT
2* Speed Parallel	£129.00	£151.58
6* Speed Parallel	£235.00	£276.13
8* Speed IDE (Risc PC)	£81.00	£95.18
2* Speed SCSI EXTERNAL	£115.00	£135.13
4* Speed SCSI Internal	£89.00	£113.98
6* Speed SCSI Internal	£149.00	£175.08
8* Speed SCSI Internal	£CALL??	£CALL
CD-ROM Writer 2* speed	£789.00	£927.08

	Ex. VAT	Inc. VAT
SCSI Scanner	£255.00	£299.62

RISC PC MEMORY

Also FOR A7000	Ex. VAT	Inc. VAT
4Mb SIMM	£25.00	£29.38
8Mb SIMM	£39.00	£45.83
16Mb SIMM	£78.00	£91.65
32Mb SIMM	£159.00	£186.83

RiscPC 133MHZ 586 upgrade from only £275.00 + vat

Send in your MKII card and £329 (inc VAT & P&P) or your MKI card and £399.00 (inc VAT & P&P)

Alternative 586 upgrade

586DX133 CPU with PCI motherboard /256k cache
1Mb 64 bit PCI Graphics card
8Mb Ram with 1Gb EIDE Hard Drive
Mini Tower (or Desktop) Case
Switch box and cables or Win95 keyboard & mouse

ONLY £399.00 + VAT £468.83 inc VAT

Multimedia upgrade to above i.e. 6*CD-ROM, 16bit s/card & 25watt Speakers ADD £99.00 + VAT

ACORN MEMORY

	Ex. VAT	Inc. VAT
4-8 MB Up. (A310,440,3000*)	£175.00	£205.63
4-8 MB Up. (A5000*)	£195.00	£229.13
*rework for A3000/A5000/25mhz	£25.00	£29.38
A3010 1-2 MB Upgrade	£39.00	£45.83
A3010 2-4 MB Upgrade	£79.00	£92.83
A3010 1-4 MB Upgrade	£115.00	£135.13
A3020/4000 2-4 MB Upgrade	£79.00	£92.83
A5000 2-4 MB Upgrade	£79.00	£92.83
A3000 1-2 MB Non-Upgradeable	£22.00	£25.85
A3000 1-2 MB Upgradeable	£55.00	£64.63
A3000 2-4 upgrade for above	£69.00	£81.08
A3000 1-4 MB Upgrade	£89.00	£104.58
A3000 Serial Port Upgrade	£23.00	£27.03
A310 4Mb Upgrade	£115.00	£135.13
A400/1 1Mb Upgrade per meg	£45.00	£52.88
Risc OS Carrier Board (A310)	£20.00	£23.50
MEMC 1A Upgrade Kit	£35.00	£41.13

Alternative PC Base Units

All Pentium grade machines have the following: 16Mb Memory, 64bit 1mb PCI graphics, 1.7Gb Hard Drive, 1.44 floppy, Mini Tower (or Desktop) Case & choice of Switchbox etc. or Win95 keyboard & mouse.

Intel	Ex. vat / Inc vat	Cyrix	Ex. vat / Inc vat
P100	£650.00 / £763.75	P120+	£728.00 / £855.40
P133	£829.00 / £974.07	P150+	£774.00 / £909.45
P166	£984.00 /£1156.20	P166+	£868.00 /£1019.90
Pro200	£1224.00/£1438.20		

SYSTEM ADDITIONS

Mutimedia upgrade to above i.e. 6*CD-ROM, 16bit s/card & 25watt Speakers ADD £99.00 + VAT

WIN95 OR DOS/WIN3.1 ADD £69.00 + VAT

For complete systems just add the Monitor of your choice. (8* MULTIMEDIA ADD £120+VAT)

IT worksheets

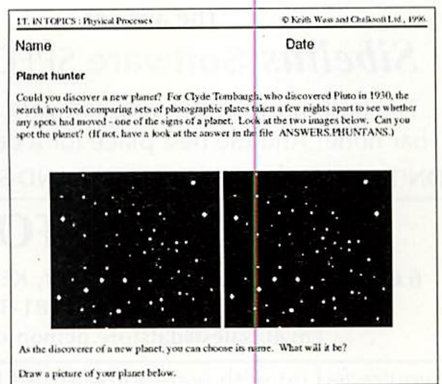
Personally, I have a slight bias against worksheets solely due to the way I've seen them used in the past. We've all seen it, and if we're honest, many of us have done it. You come in one morning ill prepared, and dish out a pile of third-generation photocopied worksheets to keep the kids quiet for an hour while you sort out your head with a cup of coffee. (For hi-tech teachers, substitute video for worksheet .)

Topic resources such as worksheets do receive a mixed reception from teachers. Some claim that commercially produced material seldom fits individuals' teaching styles, while others see them as the basis for developing schemes of work.

A short while ago, a colleague (no, it wasn't me) developed some excellent material for a well-known computer program. After eventually managing to persuade someone to market it, three copies were sold in 18 months (including the one he himself bought) while the program itself was a runaway success. Meantime, numerous individuals in countless schools are producing almost identical material. This duplication is a waste of human resources. We should be sharing material.

Chalksoft apparently believe there is still scope for commercial subject/topic material and have produced IT in Topics theme packs costing £15+VAT per pack. Currently there are four packs each containing a range of material from worksheets in Draw format to animations and simple programs.

The latest offering is *Physical Processes* for Key Stage 2 Science and contains a wealth of material which completely covers this strand of the National Curriculum. Others in the series are *Life Processes and Living Things* for KS2 Science, *Britain since 1930* for KS2 History and *Art and Artists* for KS2 Art. I strongly recommend that teachers try at least one of these packs - you won't be disappointed.


IT. IN TOPICS : Physical Processes — © Keith Wass and Chalksoft Ltd., 1996.

Name — Date

Planet hunter

Could you discover a new planet? For Clyde Tombaugh, who discovered Pluto in 1930, the search involved comparing sets of photographic plates taken a few nights apart to see whether any spots had moved - one of the signs of a planet. Look at the two images below. Can you spot the planet? (If not, have a look at the answer in the file ANSWERS.PHUNTANS.)

As the discoverer of a new planet, you can choose its name. What will it be?

Draw a picture of your planet below.

Chalksoft may be contacted on (01775) 769518 or fax (01775) 762618.

Xavier's CD-ROM

In an attempt to get their programs more widely known, Xavier have created a CD-ROM, holding their entire range of programs. These discs are not for sale, but are being loaned to advisory departments for them to install on a machine for evaluation and demonstration purposes.

Xavier began by working their way through the list of Acorn Education Centres and the response has been enthusiastic.

The thinking behind concentrating on the AECs is simple – they can be trusted not to make further copies, or breach the spirit of the loan scheme.

If anyone in an education centre would like to borrow a copy they should contact Dave Hall on (01248) 382616 (voice) (01248) 382599 (fax), e-mail: pss005@bangor.ac.uk or WWW http://www.psych.bangor.ac.uk/deptpsych/xavier/

Teachers' deal for computers

I've always felt that teachers would be a great deal more comfortable using Information Technology in their lessons if they had more hand-on experience. The best way to give them that experience is to give them a computer.

Giving away all that hardware is clearly never going to happen but offering financial deals which do not overstretch teachers' budgets is the next best thing. Xemplar Education have recently announced that they feel computers for teachers are as important as computers for schools. The scheme offers an extended credit plan at 0% APR. A £200 deposit is payable initially followed by 24 monthly payments of £74.96 making the total amount payable £1999.04. For further details call freephone 0500 666777.

International e-mail

Janette and Paul Frimley are teachers in New Zealand and would like to hear from anyone in the UK (or anywhere else for that matter).

Janette – Frimley Primary School, Hastings, New Zealand, ages 5 - 11, range of Acorn machines in all classrooms and a suite of RiscPC in which I teach 3 days per week. Many cultures but mainly Maori/Pakeha children. Special Needs unit attached to school. E-mail: frimleys@ramhb.co.nz

Paul – Onekawa Primary School, Napier, New Zealand, ages 5 - 11, BBC and Acorn in all classes. Mainly Pakeha children, but many Asian, Maori. Base for resource teachers and special integrated deaf unit. E-mail: onekawa@ramhb.co.nz

Education pirates

Still with Xavier, Dave Hall contacted me to tell of an interesting phone call he recently had from an AEC that will remain nameless. The manager was concerned that some of the schools in his area were passing around copies of Xavier's software and wanted a list of schools they had supplied. It is very much to his credit he was clearly determined to root this out.

Contacting me

You can contact the Education page by writing to me, Geoff Preston at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: aueduc@idg.co.uk

An Xemplary tale

Paul Heinrich looks forward to the future with Xemplar

Xemplar Education – the end of Acorn systems or the dawn of a new future? As it happens this new company is just possibly the most exciting event in educational computing for some time. As managing director Brendan O' Sullivan puts it, the company represents, 'A whole new beginning for IT in education in the UK'.

Xemplar Education is a joint venture company owned equally by Acorn and Apple with a clear mission to provide complete IT solutions to schools through a service dedicated to meeting the needs of education customers. With access to the best and most innovative technology from both parent companies, and others, Xemplar offers something new and exciting.

For the first time there is an IT company whose sole purpose is to support education, which intends working in partnership with teachers and schools and which O'Sullivan explains is, 'committed to the development of children today, tomorrow and every day.'

Alive and well

Following the restructuring at Acorn over the last year can the demise of Acorn Education instill confidence in education users? The same users who worry about the long-term future of RISC OS systems have to fight pressure from the uninitiated who think that real computers are Wintel based.

On this point O'Sullivan is emphatic, giving categoric assurances that, 'RISC OS is alive and well! It continues to be and will be a very important part of Xemplar's business. RISC OS is a huge revenue stream which we need to protect and develop.' No worries here then.

Not only will there be continued development but there are suggestions of RISC OS on a co-processor card for the PowerMac. This bright future is confirmed by intended introduction of StrongARM chips over the next year or so. None of this will matter unless the development of quality software continues. Xemplar is ready to grasp this particular nettle, putting around 1 million into supporting third party software developers this year. Discussions have already started and plans are in place.

Meeting customer needs

Such a strategy is crucial. Many favourite applications will not run in their present form on StrongARM platforms, and backwards compatibility has always been an Acorn strong point.

The proposal to make StrongARM chips available to developers from Autumn 1996 should ensure the wide availability of suitable software when the first RiscPC SA systems are launched at BETT '97, confirming Xemplar's commitment to meeting customer needs. This accords well with the companies intention to listen to the market and to accept feedback. All the evidence from the first weeks of the operation suggest that this is not mere PR hype.

At a recent meeting of Acorn in Education Centre managers, criticisms and suggestions were acted upon swiftly. The fact is that Xemplar is a small company of around fifty staff, and needs the support of associates, agents and developers to meet its objectives. This makes a continuing partnership crucial to all concerned. For such businesses the opportunities are now greater than they have been for some time.

Acorn's new range

The new range of Acorn machines is exciting and well targeted on the needs of the classroom. The entry level system continues to be the A7000, enhanced by the Autumn with a 40MHz processor and 26MHz memory chips, giving it the power of the current RiscPC 600. During 1997 it will acquire an ARM7000FE chip and EDO RAM.

Mid-range systems will continue to be based on the RiscPC 700, initially fitted with quad speed CD-ROM drives, but with ARM 810 processors from early 1997 with a StrongARM variant by late 1997. Top of the range machines will follow a similar development route but will include a pre-installed 5x86 co-processor card and pre-loaded Windows95 software.

And goodies to come? Well, a PowerPC Reference Platform is suggested towards the end of next year and the much vaunted Network Computers, backed by Larry Ellison of Oracle are almost ready. There could be 20 million people out there using RISC OS within eighteen months.

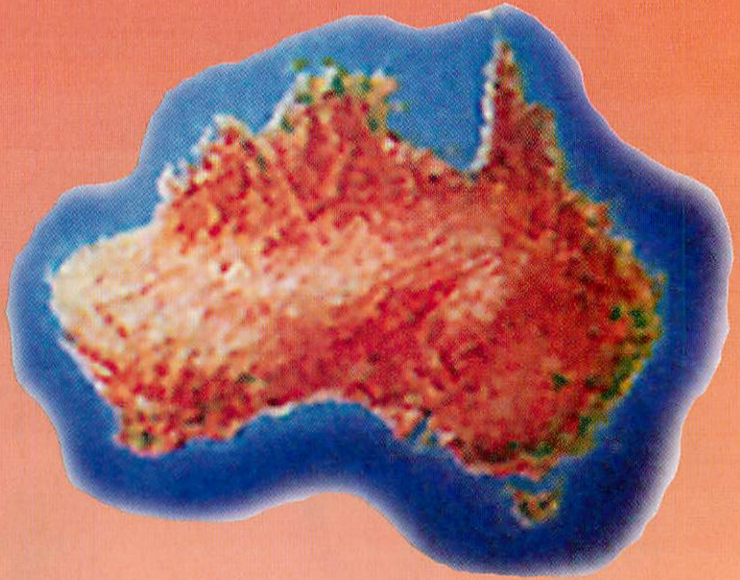
Everything about Xemplar exudes confidence and nowhere more so than in the future of Acorn products. With support for RISC OS guaranteed and a rapidly developing product range, no school need be afraid of buying Acorn products. They are still probably the finest tool for education and the only one that can meet in full the enormous range of educational needs. An Xemplarary tale indeed. AU

• *Paul Heinrich is an education consultant and writer working for a major Acorn in Education Centre.*

Contact details

Xemplar Education Limited,
The Quorum,
Barnwell Road, Cambridge CB5 8RE
Tel: +44(0) 1223 724724
Fax: +44(0) 1223 724324
WWW: http://www.xemplar.co.uk/

Acorns aren't just suited to UK schools, they're proving very successful in Australia. Mark Moxon reports on IT down-under



strikes

The Australian education system is interesting, to say the least. If you know anything about the UK's education system, you'll recognise a lot of what happens on the other side of the world, but sometimes the attitude of Australian educationalists is very refreshing.

The most obvious difference between the UK and Australia is that Australia has no National Curriculum. This will come as no surprise if you've ever encountered the relationship between Australia's six states and two territories: each has its own state government, each has its own laws, and common agreement is a rare thing indeed.

There are consistencies, though. All the states and territories have the same main eight curriculum learning areas: Design & Technology; Maths; English Language; Language other than English; Health and Physical Education; Social Sciences; Science; and The Arts (which includes Music and Drama). The only differences between the states are the achievement levels and the speeds at which subjects are taught.

'There is an agenda in place for a National Curriculum,' says Julie Burston, primary education manager at Australia's biggest Acorn dealer, Education Computing Services, 'but it'll take time to implement. For example, some states start children in year one when they are five, and some start them in year one in the year they turn five. That's a difficult difference to address.'

There is one universal policy. There isn't a separate learning area for Computer Science, and that is because the government has said of technology: 'computers should be used to assist with learning'. This is perhaps the most fundamental aspect about IT in Australia: IT is not a subject, it is a teaching philosophy.

Funding IT

It's easy to see why schools take a curriculum-based approach to computing. Most primary schools do not have a dedicated IT teacher, and it's normally down to one of the teachers to run the computer room. Secondary schools tend to have someone who can look after the computers because the secondary Design and Technology area has a computing section in it, but as with UK schools, primary teachers have to be both technical support and users. 'It's mainly a question of funding,' says Julie. 'There hasn't been any funding specifically for computers since 1987, so primaries are having to raise their own money to buy machines.

'In 1994 the state government allowed primary schools to lease equipment and organised bulk lease deals, but the schools still have to raise the money to pay for the leases. There hasn't been an increase in the budget to cater for it.'

A large number of primary schools raise the money through their parents' associations. The only problem is that sometimes the parents can get too involved.

'One of the problems we sometimes encounter is that because parents assist with the financing, they want to assist in the decision of which computers to buy, and they don't necessarily have any educational background,' says Julie.

'The best educational decision isn't always the cheapest. The schools that have most success in using computing resources are those in which the teachers have made an educational decision, and have asked the parents to back them financially. If the teachers drive the whole process, they will be more interested in using the computers well.

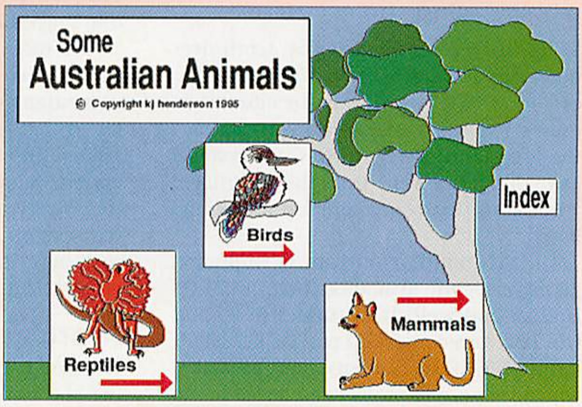
'In some schools the parents make the whole decision, and then wonder why the teachers don't use the machines in school.'

Acorns in Australia

This is where the Acorn platform comes in. Acorns have been around in Australia since the days of the BBC Micro, and there are a lot of primary schools in Australia that still use Master Compacts. A number have upgraded, but it's a slow process. There also isn't the automatic recognition of the Acorn branding that there is in the UK: Acorn is not the market leader in Australia.

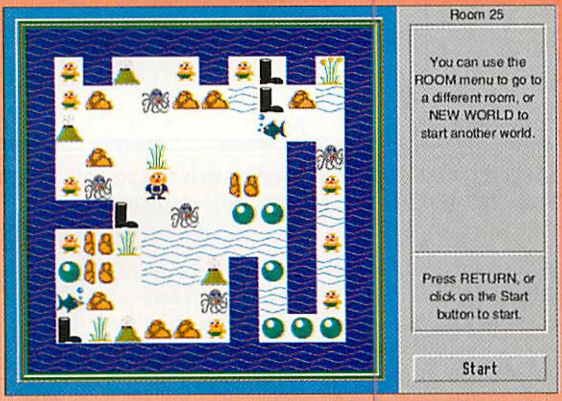
'You can't say that one platform is the most prevalent in schools,' says Julie. 'Most schools have multiple platforms evident, because the different machines serve different areas. Schools are encouraged to look at the solutions from a software viewpoint: they buy computers to run certain packages, rather than buying certain hardware and then looking for software to run on it.

'Ninety per cent of schools have PCs in their offices, and they'll also have PCs running the library. However in the curriculum it isn't so easy to specify; certainly, a lot of primary schools are choosing Acorn solutions because of the software that's available for curriculum computing.'

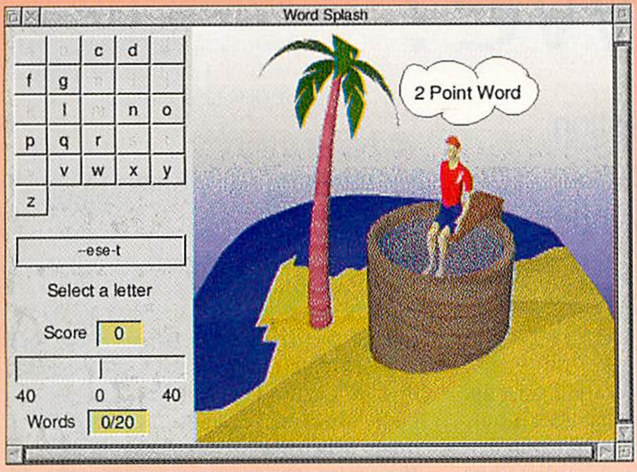


My World 2 from SEMERC has proved very popular, and a number of screens are available with an Australian flavour

The empire back



Greygum Software's The Land of Um makes problem solving fun



Assessment Technology's SuperSpell is a good example of Australian software: 4Mation is about to market the program in the UK

It's also true in the UK that the software is what gives a computer its educational value, but there are some interesting areas where British software has won the case for Acorn in Australia, without necessarily intending to.

'The software we sell is mainly from the UK,' says Julie, 'though there are some very good Australian software packages around, such as those from Greygum Software. But the truth of the matter is that the English software fits our curriculum so well: Acorns have a huge advantage over American solutions.

'For example, the best packages available for primary Design and Technology are *Spex, Tabs* and *smArt*, and they're only available for Acorns. The United States doesn't have Design and Technology designated as a learning area in primary schools, so there's no Apple or PC software for this area. When teachers realise this, it's a real bonus for the Acorn case.' But it's not just the number of subject areas covered by Acorns that is proving a sales boon in Australia. It's also the quality of the software, and the amount you get for your 'software dollar'. 'The good thing about Acorn software is that it is open-ended,' says Julie. 'so it's very good value for money.

Take drill-and-practice software: this isn't much use, as it's so closed. Once a pupil has done it, they're sick of it and it's no longer any use. But put a child in front of *Spex*, and you can give them endless design briefs, and they use it in a totally different way: the software never loses its appeal.'

There are also some interesting success stories that have come directly from software-driven arguments. In secondary schools, PCs have always been used in year 11 and 12 business studies, because PCs are what pupils will use when they leave school.

However, nearly every secondary school in Western Australia now has an Acorn in its maths department, because the software suits them so well. It simply can't be beaten on any other platform.

Acorns in schools

There are a number of schools who have embraced the Acorn philosophy, and are now reaping the benefits. One is St Hilda's Anglican School for Girls in Perth.

'We use Acorns extensively in the curriculum,' says Alison Stralow, the Junior School Computing Co-ordinator. 'For example, our year one is doing a project on bears, so we're making a multimedia application in Magpie which is an extension of the contents of some of the books the teachers have been using. We add in pictures and sounds, and all of a sudden it's much more exciting for the children.'

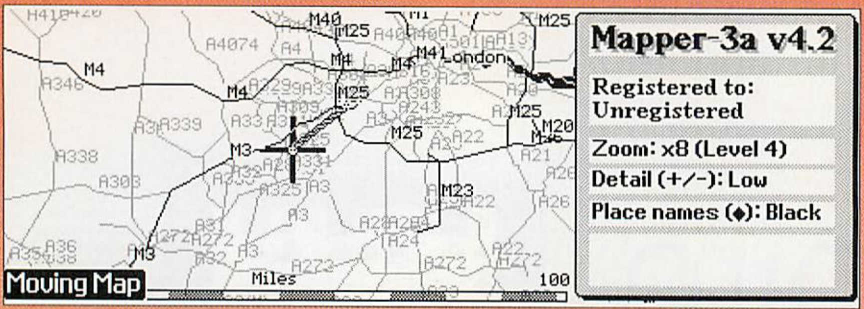
Multimedia is the biggest change that Alison has seen in the classroom this year, and the kids are loving it.

'The girls' engagement in the learning process is 100 per cent,' says Alison. 'They simply love it, and it supports everything you know about learning theory: they're actively involved in the creation process.'

It's a similar story at Scotch College, an independent school where four of the school's 12 years all have individual Pocket Books, bought for each pupil by the parents as an essential purchase, along with school uniform and pens. The computer department is very active in supporting the teachers, who are now great fans of the inclusion of the Pocket Book in lessons.

'It's very heartening to have a teacher come to you, excited that the class has managed to use Pocket Books in the lesson,' says Barney Clarkson, director of computing at Scotch. 'It makes it all so worthwhile.'

So while Acorns might not be in quite so many schools as in the UK, and while Acorns may have been designed with only the UK education establishment in mind, they're proving very successful in Australia. The fact that Acorn dealers in Australia are seeing increased profits, rather than the downturn experienced in the UK, only goes to show that downunder, they're listening to the Acorn argument. AU



With the correct software, a moving map is also possible. Version 4.2 of Mapper will accept GPS data and display a moving map

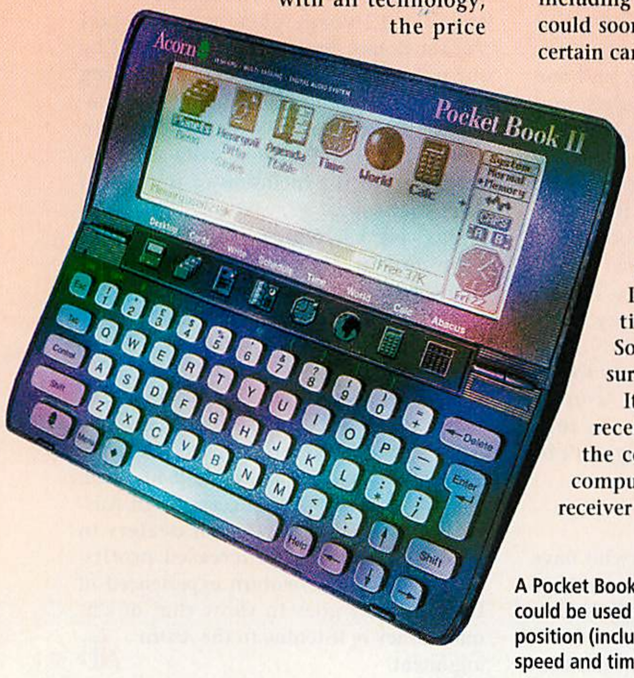
Where are we?

A very good question. Geoff Preston looks at the hi-tech method of answering this age-old problem

Information Technology seems to be heading skywards – literally. A few years ago the American government launched several satellites which now orbit twice a day 11,000 miles above Earth, transmitting precise time and position information. At any point on the globe, at least three of these satellites will be 'visible' and so, with the right equipment it's possible to pinpoint one's exact location, including altitude.

If actually moving, it's possible to compute speed, direction and estimated time of arrival. I use the word 'exact' with caution because although it's technically possible to pinpoint one's location to within about a metre, only the US military actually have access to that degree of accuracy. For the rest of us, the US have placed a restriction on the system such that its accuracy is currently about 20 metres.

This is GPS or Global Positioning System and although it's been around for a few years, the cost of receivers has tended to limit its ownership to professional applications such as for use in ships and aircraft. (It may be regarded as the 21st century's equivalent of navigating by the stars.) As with all technology, the price goes down and the specification goes up. The price of a personal GPS handset is now such that it could soon be popping up in a wide variety of navigation applications including the automobile industry which could soon be listing GPS as an option on certain cars.



A Pocket Book II or Psion 3a could be used to locate your position (including altitude), speed and time of arrival

Personal GPS hardware

Several companies supply receivers which will output current latitude, longitude and direction in a small unit about the size of a mobile phone. The LCD screen displays the information in both text and graphics. Some will output OSGB (ordnance survey grid reference).

It's possible to connect many GPS receivers to a computer and, with the correct software installed in the computer, transfer the data from the receiver for further processing. I find it difficult to envisage very much use for a GPS receiver connected to a desktop computer, but when connected to a portable computer such as an Acorn Pocket Book, it opens up possibilities for some very worthwhile applications. Hand held receivers vary in price with the cheapest at about £200.

If you wish to investigate GPS further, one company of particular note is Positioning Ltd who produce hardware and software for Pocket Book computers. About the simplest GPS/Pocket Book solution is *Findit* which includes a receiver and Pocket Book software.

To save you having to juggle the gear lever, steering wheel and Pocket Book, they also produce a cradle designed for use in the car which holds the computer and powers it from the car's cigarette lighter. (This enables you to give the computer display your undivided attention without being distracted from events outside the car.) *Findit* will get a more in-depth review next month.

Moving maps

The software which will process GPS data and provide a moving map, surprisingly, is almost free – it costs just £14 to register and it's been featured in these pages before. It's Steve Litchfield's *Mapper*. The program must be v1.41 or later and may be downloaded free from 3-Lib. *Mapper* will read the GPS data and produce a moving map display on the Pocket Book. You are the cross, which moves across the screen as you drive. When the cross reaches the edge of the screen, the map moves such that the cross is once again centred.

At this point, I feel a word of caution might be appropriate. Watching a screen while driving is highly dangerous, if not illegal. It would best be entrusted to a navigator.

Who can use it?

Falling hardware prices have led to more people being able to afford goodies like GPS receivers which, only a very short time ago, would have been out of the question. Secondary schools and colleges might well be able to use GPS on field trips and other expeditions, but not yet, I think.

The software is good, but the imposed accuracy (or lack of it) at present is such that it is unlikely to be of any real use in the relatively small area of a class orienteering trip. But, in a couple of years, (or less) who knows.

Mapper can be downloaded from http://ourworld.compuserve.com/homepages/ slitchfield/gpsnotes.htm

Positioning Ltd may be contacted on (01403) 276811 AU

Free Ads

• Risc PC 600, 9Mb RAM, 210Mb HDD, 14in AKF monitor, 16 bit sound, CD-ROM drive, PC486SXL40 processor, DOS 6.3 & Windows 3.11, Impression Style & Advance, numerous games, £1600. Tel: (01706) 815182.

• Risc PC, 486 SX 33 card with x86 software and PC DOS 6.3, £90. Tel: 0121-745 3163.

• For sale: A4000, 4Mb, 80Mb Hard disc (no monitor) c/w full Home Office software, Scanlight 256 card, Canon Turbodrive, all manuals and cables. Excellent condition. £250 ono. Tel: 0181-504 9506.

• 40Mb Hard disc, 3.5in, internal, £25 or best offer. HP2235 Rugged Writer, 24 pin, heavy duty, wide carriage, spare ribbon, best offer. Tel: 0181-690 3415.

• BBC, Hybrid Music 5000 synthesizer with music keyboards, all manuals, and about 20 discs of music, £140 (also other BBC stuff for sale). Tel: (01275) 392803.

• Wanted: copy of Acorn User Jan 1990 3.5in cover disc. Tel: (01262) 490479.

• Acorn A4000, Home office pack, 4Mb RAM, 80Mb Hard disc, colour monitor, screen filter, lots of software, with manuals. VGC. £600 ono. Tel: Fareham (01329) 846968.

• A3000 Acorn, Video Enhanced High Res Graphics 14in Multiscan colour monitor, £250. Tel: Middx 0181-967 3048.

• A3000, Acorn colour monitor, Citizen 120D printer with Learning Curve package, hardly used, no reasonable offer refused. Tel: (01751) 472201.

• A5000 CD-ROM player. Morley Revolution, complete with Interface podule, cables and software. 1 year old. £75.00. Turbo Driver for Canon Inkjets, £15.00. Tel: Oxford (01865) 62688.

• Games wanted: Asylum, Diggers, Acorn Computing magazines, Jan 92 to May 93 (including Special 92). Must be in good/excellent condition with discs. E-mail: gbegbie@cin.gov.au

• BBC software. Over 200 games plus other software. All on 80 track discs. £29 the lot. Model B or Master 128 (plus other BBC stuff). Tel: (01275) 392803.

• Acorn A3000, 2Mb RAM, AKF18 colour monitor, Epson LX400 dot matrix printer, software and manuals, £300. Tel: (01277) 232908.

• Having trouble creating boot files? With EasiBoot create boot files that load/boot applications, backdrops, icons, passwords, new banners plus more. Cost £10. Call Alister (01629) 584295.

• Risc PC 600, 12Mb RAM, 1Mb VRAM, 210Mb HD, CD-ROM (4x), 486 PC card, 16M clr hand scanner (400dpi), !GameOn, !SmartCD+, !ImpressionJnr, !Starfighter 3000, 100 more, all mags cover discs from 93-96, 15 HD discs arched with the best PD. Good condition, all manuals provided. Purchased for £3571, will sell for £2300 ono. Tel: (08) 332 3037 (South Australia).

• Wanted: BBC compatible 5.25in double sided 40/80 floppy drive. Tel: John on Sheffield 0114-236 2742.

• For sale: Archimedes and Sega Megadrive games, £4 - £15. For more info tel: Richard 0181-524 1210 (evenings).

• A3000 Learning Curve, colour monitor and software, £100. Tel: (01952) 811498 (Shropshire).

• A4000, 4Mb RAM, 8Mb HD, RISC OS 3.11, AKF18 monitor, software including Personal Accounts 3, PC Emulator v1.8, Flashback, Simon the Sorceror, Cannon Fodder etc, £350. Phone: (01734) 814160 evenings (Hants).

• A410/1, 4Mb RAM, 36MHz ARM3, 210Mb IDE-HD, RISC OS 3.1, Multi-sync monitor, software on request. £400 ono. Tel: Chris on 0171-733 5289.

• A5000, 4Mb, 40 + 170Mb HDs, RISC OS 3.1, AKF18 monitor, PC Emulator, lots of software, excellent condition, boxed with manuals, £500 ono. Tel: (01246) 237037 (Chesterfield).

• A4000, 4Mb RAM, 80Mb Hard disc, RISC OS 3.1, AKF18 monitor with Cumana SCSI Interface and Home Office software. £550 ono VGC. Tel: (01222) 530358 (evenings).

• A420/1, 2Mb RAM, RISC OS 2, Acorn colour monitor, Epson LQ400 printer, 20Mb Hard drive, Learning Curve software and boxed games, ideal for school use. VGC, £300 ono. Tel: (01785) 817465.

• A5000 Learning Curve, 2Mb RAM, 40Mb HD, AKF18 colour monitor, PC Emulator and several games. Little used. Good condition. £395. Tel: Telford (01952) 415550 (eves), (01952) 274147 (days).

• Risc PC600, 9Mb RAM, 425Mb HD, colour monitor, CD, 3 1/2 disc drive. Mistaken purchase by confused Mac User. £650. Tel: 0171-487 3389 (central London).

• For sale: Watford IDE HD interface (A310, A4x0), £25 ono. 20Mb ST506 HD for any A4x0/1, 25Mb of installed software, £25 ono. Backup companion only £20 ono. Tal: James (01274) 877299.

• Wanted: Parallel port CD-ROM drive, £50 or nearest offer for A3000, also wanted CD-ROM software. Tel: (01733) 269144.

• Wanted: Any BASIC Assembler manual for under £20. Phone Ben on (01227) 830470.

• Acorn A4000, Home Office pack, 4Mb RAM, 80Mb HD, colour monitor, screen filter, lots of software, boxed, VGC. £600 ono. Tel: Fareham (01329) 846968.

• For sale: A selection of over 25 PC cover CD-ROM discs for a selection of different PC magazines 15.00. Phone: Matthew on 0181-523 8058.

• For sale: A3010, 2Mb with monitor (CM8833II) upgradeable to ARM3, full documentation and software. £250. Tel: 0141-634 3088.

• A310, RISC OS 1.2, 1024K RAM, dual internal 3.5in drives, Acorn colour monitor, NEC PinWriter, dot matrix printer, Wordperfect, Zarch, 1st Word plus, PC Emulator, £240. Tel: (01727) 864290.

• A3000, Phillips RGB colour monitor, Epson JX80 colour printer, £285 ono. Tel: 0116-288 7098 (Leics).

• Computer magazines for sale. Over £30's worth from Xmas 1995. Offers over £5. Buyer collects. Please phone (01484) 841687 (Hudds).

• Wanted: A3000, 4Mb RAM, RISC OS 3.1, ARM3, Hi-Res monitor hard disc. Tel: (01482) 376413.

• A3000, 2Mb, RISC OS 3.1, 30Mb HD, CUB 3000 monitor, Amstrad DMP2160 printer, First Word plus, Joystick and interface, various software. £185. Tel: (01702) 714298 (evenings).

• A420 upgraded to 4Mb RAM, ARM3, 50Mb HD, VIDC, £250. Eizo 9060S Multisync monitor, £150. Archimedes spares, hardware, software. Phone for details. Tel: 0181-751 2120.

• 8Mb SIMM for Risc PC, £45. (Surplus to requirements following 32Mb upgrade). Tel: Spalding (01775) 723981 ext 241 (office hours) or (01775) 723823 (evenings).

• A4 portable, 4Mb RAM, 80Mb HD, mains unit, mouse, shoulder bag. £500. Tel: 0181-766 8027.

• Games: Speedball 2, Battle Chess, £7 each. Quest for Gold, Lotus 2, both on HD discs, £6 each. Offers for PC emulator v1.82, DOS 3.3. Phone before 6pm, ask for Richard on (01329) 285367.

• A3000, 4Mb internal 40Mb IDE drive, RISC OS 3.1, original packaging/manuals/discs. ALl for £200. Tel: (01582) 841460 (Markyate, Herts) evenings or weekends.

• RiscPC 600, 486 second processor card, 8megs and 2megs VRAM, 420Mb HDD, HP Deskjet 520, includes all manuals. Elite, Starfighter 3000 games. Call Jon on (01924) 498065.

• 486 SX-33 PC card for RPC, £100 + post. Pocket Book I incl games and printer lead, £100. Call Samuel (016626) 58066 or (0831) 493564.

• Wanted: Second hand RISC OS 3 PRM's. Tel: Robert on Holbeach (01406) 362157 (South Lincs) evenings or Saturdays.

• A3000, RISC OS 3.1, 2Mb, 120Mb IDE HD, colour monitor, video digitizer, Pres system housing, printer, joystick, software + many magazines. £375. Tel: (01628) 31072.

• Acorn Risc PC 600, 9Mb RAM, 203Mb HDD, 14in AKF colour monitor, 16 bit sound card, CD-ROM drive, Impression Style & Advance + other software. PC 486 upgrade with DOS 6.3 and Win 3.11 + games. £1500. Tel: (01706) 815182.

• A3000, Learning curve package, 2Mb RAM, colour monitor, stand, Star LC10 colour printer, applications discs, Genesis, 1st Word plus etc including manuals. £325. Tel: St Helens (01744) 895261.

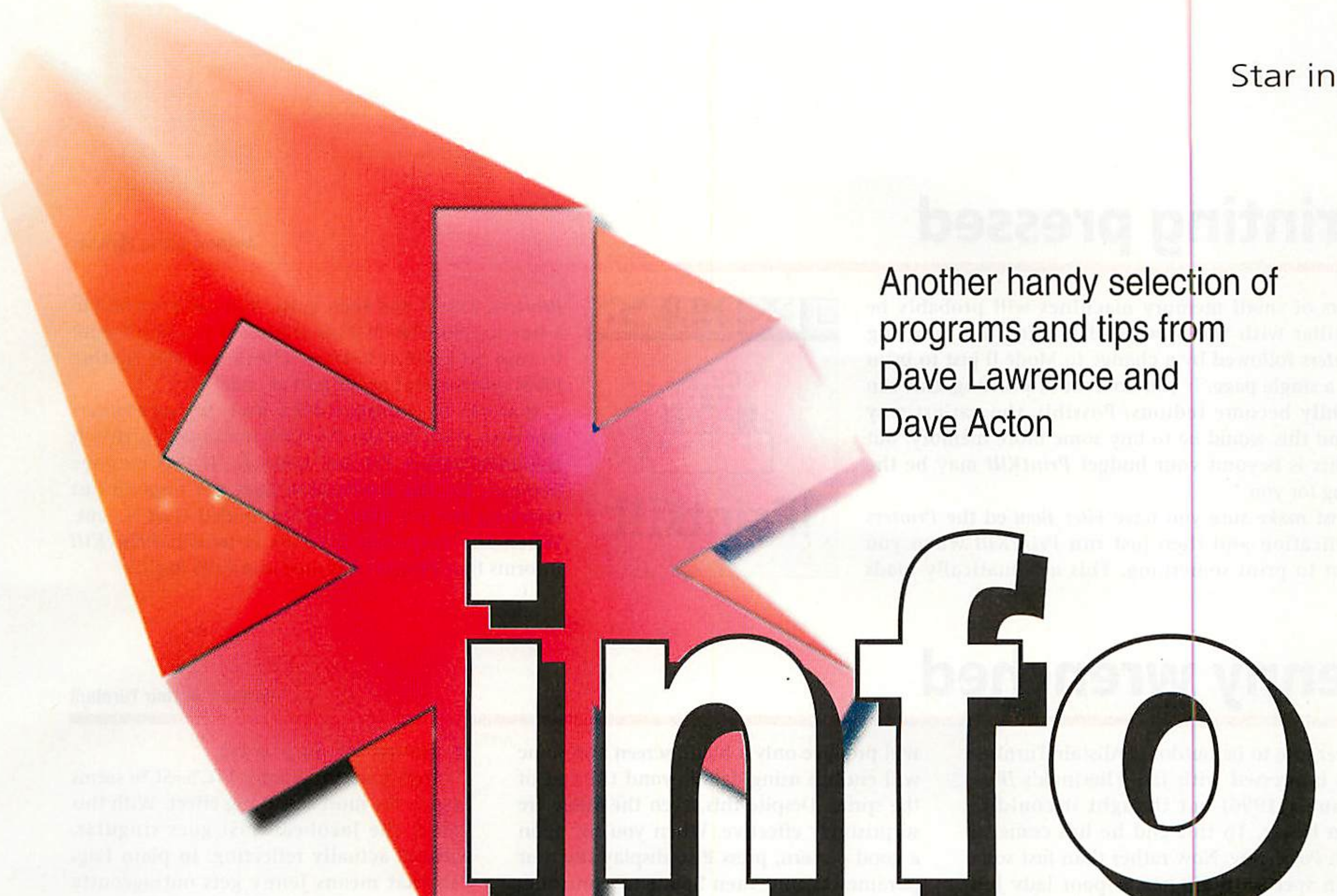
• Wanted: Impression Publisher (full version), Schema 2, Cannon Fodder, Lemmings II, Scrabble, Sensible Soccer, Zool, Burn Out and BattleChess. Contact Paul (age 13) on (01243) 377775.

• Wanted for BBC Model B, any educational software for 4-8 years on cassette or 40 track disc. Call Northumberland (01665) 710595.

Acorn User Free Ads Service

Why not take advantage of our free reader ad service? Fill in your details on this coupon (25 words maximum, one word per box below) and send it to Free Ads, Acorn User, IDG Media Ltd, Media House, Adlington Park, Macclesfield SK10 4NP. Only one ad per reader, please. Although we try to publish every ad we receive, we can make no guarantees; publication is entirely dependent on space and time constraints. We may also publish free ads on the cover disc if magazine space is short. Please fill in your name and telephone number below: these will not be published, but they enable us to contact you in case of any queries.

Your name:.. Telephone no: ....



Another handy selection of programs and tips from Dave Lawrence and Dave Acton

Bunch of keys

Author: Pontus Lurcock

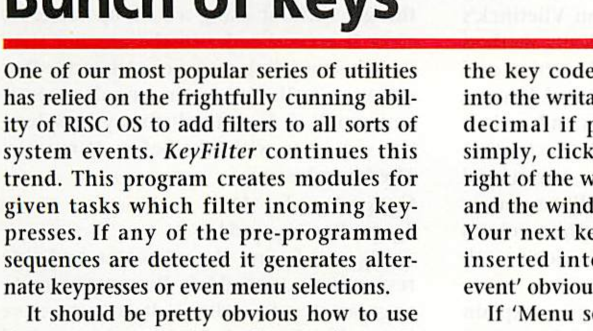
One of our most popular series of utilities has relied on the frightfully cunning ability of RISC OS to add filters to all sorts of system events. *KeyFilter* continues this trend. This program creates modules for given tasks which filter incoming keypresses. If any of the pre-programmed sequences are detected it generates alternate keypresses or even menu selections.

It should be pretty obvious how to use the program. There's one big window with a subwindow showing all the currently defined key remappings. The 'Module name' icon at the top should be filled in with the name you want to give your filter module – this can be anything as long as it doesn't clash with any other modules. In 'For application', give the task name of the application you want it to work with (i.e. the name appearing in the Task Manager window – and it's case sensitive).

The stuff beneath this allows you to alter the currently selected remapping. For the key codes you can either type them into the writable icon (interpreted as hexadecimal if prefixed with &) or, more simply, click on the display field to the right of the writable icon – it will go white and the window will gain the input focus. Your next keypress will be detected and inserted into the icon. Selecting 'Null event' obviously masks the keypress out.

If 'Menu selection' is selected you can type a sequence of menu selections into the 'Items' icon, comma separated and counting downwards with the top menu item as 0. The 'Add' and 'Remove' icons, and the 'Clear data' menu item should be pretty self-explanatory. When you add a new remapping it defaults to changing keycode &000 into itself.

Once you've defined all your key remappings and menu shortcuts, *KeyFilter* will create a module which you can save out in normal Wimp fashion. Note that *KeyFilter* won't reload modules, only data files, so if you want to change your definition without starting again it's a good idea to save as a datafile. A few example data files can be found in *Examples* inside the application directory.



The modules created by *KeyFilter* have the name you gave them in the 'Module Name' icon. They can be loaded before or after the application with which they are to be used, and will automatically detect this application loading and quitting. It won't kill itself when the application quits – it'll just hang around and re-activate if the application is loaded again. All the hard work is done by the Filter Manager – the module registers a post-filter and checks all incoming keypresses. It needs to be a task in order to keep tabs on TaskInitialise and TaskCloseDown messages.

There are some limitations: modules can't be loaded back in for editing and keypresses can't be mapped to submenu/dialogue box openings. Only one task can be filtered at a time by the filter modules. Shift-Ctrl keypresses with 'normal' keys can't be differentiated from simple Ctrl-keypresses, due to the way the Wimp handles keycodes. *KeyFilter* will not, of course, change the key short-cuts displayed on an application's menus. This would take a lot of programming effort, or alternatively a little judicious hacking on the part of the user.

Pontus says that the program was original written for the *1st Word Plus* word processor which had some rather odd key assignments, e.g. F3 for italic instead of the more usual save. He also points out there are many subtle uses of *KeyFilter*: PC-ites can remap Delete to Copy and Copy to Page Down, giving those keys the effect for which they will normally be used. If you're feeling wicked, you could always also sneak into your friend's house and remap his keyboard to generate all sorts of silly characters.

Printing pressed

Author: Justin Fletcher

Users of small memory machines will probably be familiar with the process of loading and quitting *Printers* followed by a change to Mode 0 just to print out a single page. If you do a lot of printing, this can rapidly become tedious. Possibly the easiest way round this would be to buy some more memory, but if this is beyond your budget *PrintKill* may be the thing for you.

Just make sure you have *Filer_Boot'*ed the *Printers* application and then just run *PrintKill* when you want to print something. This automatically loads



Printers, kills it and then quits. You can even add in a line to select Mode 0 (or Mode 8 if you don't want to lose all your colours) – check out the routine PROCprintersdied at the end of code.

It works by issuing a *Filer_Run* to run *Printers* and then waits for the *PrintInit* message to arrive. It responds with a *PreQuit* message. If this message bounces, i.e. the application does not respond just rejecting the pre-quit, a full-blooded *Quit* is sent. When the response for this is heard, *PrintKill* informs that Printers has died and exits itself.

Jenny wrenched

Author: Alistair Turnbull

Never one to be outdone, Alistair Turnbull was impressed with Jan Vlietinck's *!Roto* (January 1996) but thought it could be even better. To this end he has come up with *PoorJenny*. Now rather than just some plain speedy rotation, our poor lady Jennifer is really put through the mangler.

Once you've run the program for a bit, you can press Space to randomise some of the parameters of the distortion. Not all the values it generates are 'legal' – some will produce only a blank screen and some will end up using data beyond the end of the sprite. Despite this, even the latter are surprisingly effective. When you hit upon a good pattern, press P to display the four parameters and then Space to continue. Press E and you can re-enter a previous set or try out some of your own – only the numbers 1-8 are valid. Alistair says:



'I'm not actually sure what the formula for the mapping is. I made it by starting with something similar to Jan Vlietinck's formula, but I used a Runge-Kutta method for calculating the sines and cosines, and so they're not very accurate, and I'm not quite sure what they are sines and cosines of. I then added to each point a vector that rotates slowly as you cross the screen, and whose length varies sinusoidally as you go down the screen, and whose phase rotates with time. Again, all this is done with Runge-Kutta.'

Sounds good by us. Can anyone explain the effect? Alistair goes on by saying:

'You might like to play with the constants:

```
TC% roughly -log2[d(angle)/d(frame)]
SC% roughly -log2[d(angle)/d(pixel)]
WC% roughly log2[maximum amplitude
of distortion in pixels]
```

'Angles are in radians. WC%=SC% seems to give the most satisfying effect. With this value, the Jacobean just goes singular, without actually reflecting. In plain English that means Jenny gets outrageously stretched without breaking up altogether. People with slower computers might like to reduce TC%.

'Runge-Kutta is a way of calculating consecutive sines and cosines (among other things) without using a look-up table. Its error is second order in the angular step, and the rounding errors cancel each other out very well. Unless the angular step is very small, it is difficult to say how long the sequence will take before it repeats. The formulae are:

$C_{n+1} = C_n + S_n \, dA$

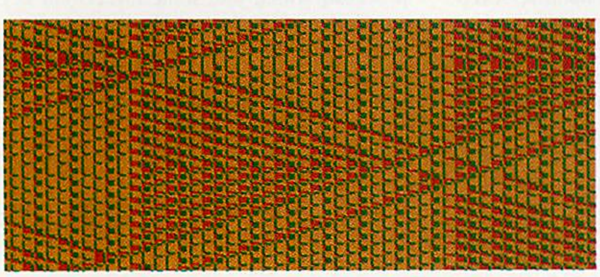
$S_{n+1} = S_n - C_{n+1} \, dA$

'C_n and S_n are the nth cosine and sine respectively, and dA is the approximate angular step in radians. It is instructive to try drawing a circle using this method for different values of dA, and comparing the results with a real circle. The main reason I am using it is that if dA is 2^{-m}, you can do an angular step in two instructions.

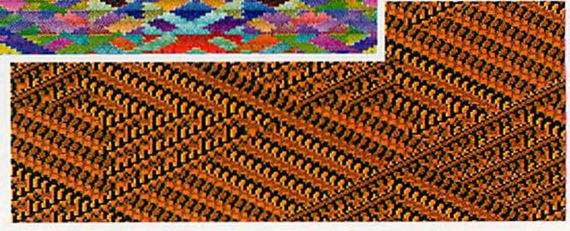
To the nines

Author: Vincent Buckner

This is a collection of nine wibbly-wobbly patterns. Select a speed with 1, 2 or 3 and a pattern with A to I. Pattern I, *Twirl 2* is a lissajous-type figure while A-H are more quilt-like. You'll see what we mean when you run the prog. We particularly like the metallic shimmering of Pattern G – *Something Else?*







Bundle of MIRVs

Author: Graham Rowbottom

Maintaining our recently found tradition of featuring a game each month in *info, here is a thermo-nuclear blast from the past in the shape of *StarBase Attack*.

The game features a base, presumably of the star variety, which falls victim to a series of... well, how shall we put it... attacks. It is a splendid and shameless version of the BBC and coin-op classic.

'To the uninitiated few', says Graham 'the aim of this game is to prevent the nuclear destruction of your cities by destroying missiles as they descend to earth. Simply point and blast – you get 150 points for each city surviving a wave of missiles and 10 points per round of unused ammunition.'

The ammo is finite by the way, so don't go mad, particularly if you're down to your last major conurbation.

The missiles come in four flavours, viz:

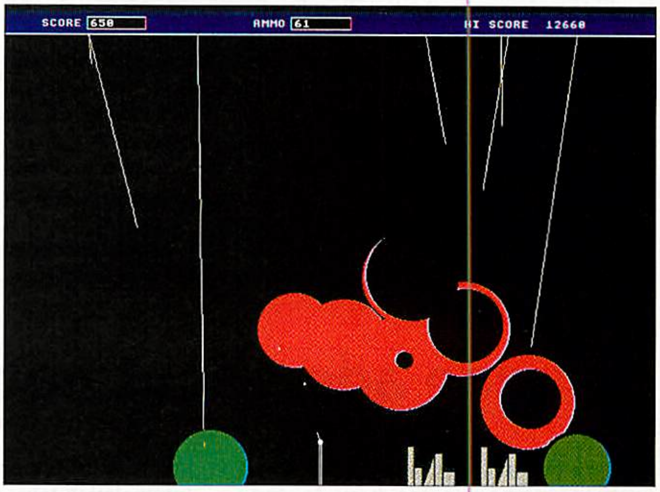
Normal – just comes down in a straight line

MIRV – looks like a normal missile but spontaneously erupts into 3-10 warheads

Shifter – again looks quite normal until it changes direction and speed

Smart Bomb – appears red on screen and can 'see' your anti-missile devices. If it detects an explosion beneath itself it moves up out of the way and then continues its descent. You can only destroy smart bombs from the side or above.

For that extra challenge, or to get a few more MIRVs per second out of the more sedate machines, try *RMFaster Basic before playing. Since the game is written in good old Basic, this command (which copies the Basic module into RAM, the access time for which is faster) can improve the performance of the game by 30 per cent or so.



All you ever wanted to know about RISC but were afraid to ask

Author: Mrs Miskin

Over the years we've carried a few little applications to display useful information about your machine on the icon bar or suchlike. The latest is a comprehensive programmable information provider.

RPCinfo settles itself on the icon bar and in a modest little box shows a variety of facts – browse forwards or back with Select or Adjust. These are: time, date, free space on a disc, free memory, screen colours and resolution and a timer. The timer runs continuously but clicking Menu freezes and restarts it. To reset simply switch to another option and back.

What is displayed in the box by default can be changed according to a text file in *!RPCInfo* called *Config*. Only those items you wish to change need be included, and the order controls the order in which the options are displayed. The following keywords can be featured:

Time – gives hh:mm

Time: <time string> – as for !Alarm e.g. <%12:%mi%se> or <%m3 %dy%st %ce%yr>. More than one time entry can be included, to allow, for instance, display of time, then date the day of week.

Date – needs no parameters, and displays a simple Date format

Free – needs no parameters, and displays the current free memory

Disc:<Title>/<Filing system>/<Drive name> – displays the title followed by the free space on the specified device, e.g. Disc:Drive4/ADFS/HardDisc4. This can also be used to show the free space on a PC partition by specifying: Disc:PCDisc/ADFS/HardDisc4.$.PC.drive_c etc.

Timer: <Optional time string> – if the time string absent, '%mi:%ss' will be used to give minutes and seconds only.

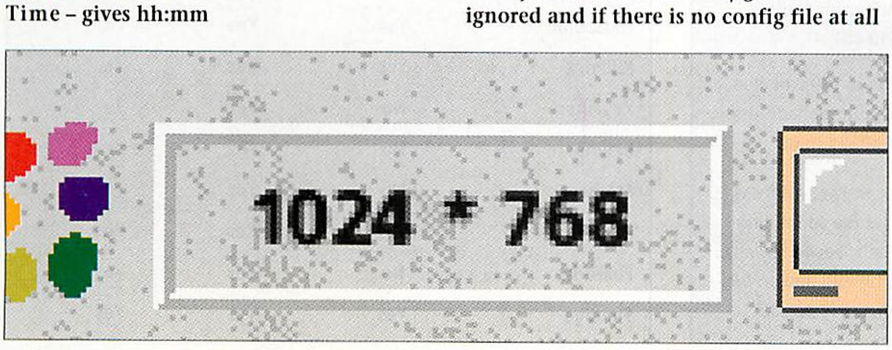
Any other lines in *Config* file will be ignored and if there is no config file at all just the time and free memory are shown.

A few configuration examples are included on the disc – copy into *!RPCinfo* and modify as required. The *RPCinfo* icon resizes itself when *Config* is read to accommodate the longest entry, so keeping text entries brief makes the icon smaller.

Unless the timer is selected, Menu allows the standard Info & Quit options, and also enables *Config* to be rescanned, so you can easily experiment with date & time formats.

The application only calls Wimp_Poll as frequently as necessary for the current option – every second for Timer (or if Time includes seconds) and up to every hour for Date (so it will not update immediately after midnight, unless you move away and back to Date). Moving away from a display of seconds will reduce the processor time used, if you are running other time-critical applications.

If an error occurs in calculating the value of an option, for instance because of an error in a time string, or because the RAM drive has been removed – the icon displays 'Error in <n>' where n is the line in Config corresponding to the call. No further attempt to display that value is made until it is next selected – so you can just skip over any options not currently working, with no time penalty.



Flash cube

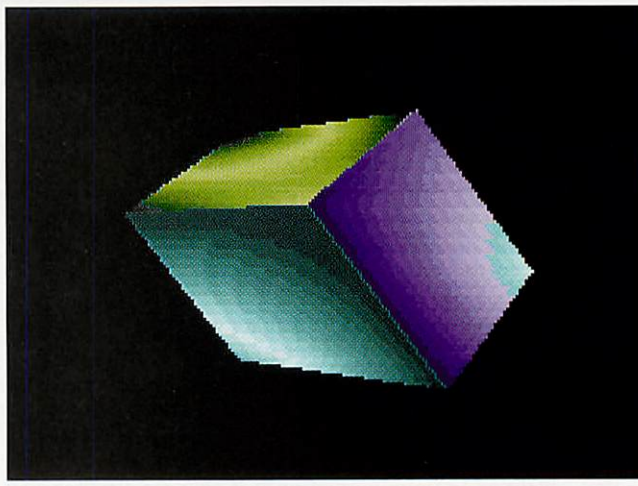
Author: Andrew Docking

A very flash cube this one. Andrew has been experimenting with Gouraud shading and the result is this pleasant little psychedelic box.

We've covered the subject of Gouraud shading several times in *info in the past (see David Walter's Basic demo from July 1992, Neil Cason's C one in December 1993 and Alistair Turnbull's machine-code one in April 1995). Briefly, the idea is simple. To improve the appearance of a 3D object made up of polygons, the colour of each vertex of each polygon is calculated and then linear interpolation is applied when shading the polygon. This smooths the appearance, hiding the joints.

Instead of calculating the correct colour at each corner of the cube according to a light source and the cube's current position, Andrew has simply fixed those colours. The result is the constantly shaded little box that bounces merrily about.

Apparently Andrew is working on other nifty effects and we'll be seeing an excellent texture-mapping demo from him in this column shortly – watch this space...



Smudge ado about nothing

Author: Keith Wood

Not one but two little graphical ditties. *FullFade* demonstrates how to fade between two 256-colour images. Because of the strange nature of the old-style 256 colour palette, such a fade is actually quite tricky. The quickest way to do it is with precalculated tables, but for a 32 level fade for example, you would need 32 bytes for each pair of start and end values – 32*256*256 – two megabytes of tables in all.

Keith does it all properly, without tables. Pixels are read four at a time and the red, green and blue components extracted. Interpolation takes place and the resulting values are stored back on screen. For speed, a simple weighting (x2) is applied to the green component. Strictly speaking, during such processes the R, G and B values should be weighted in the proportions 30 per cent, 59 per cent and 11 per cent respectively, but multiplying by two is a lot quicker and easier than multiplying by 0.59.

Smudge demonstrates full-screen 'pixel softening' in a 16-colour mode. Use the mouse to control the brush. The left button paints, the right pauses and the middle changes brush.





'The idea behind pixel softening in a 16 colour mode is that, unlike 256 colour modes, there are no RGB components to separate. Instead the colours are set up so that white is colour 15 and black is 0, and all the colours in-between follow a uniform grey scale. Softening is then a simple matter of taking a weighted average of a 3x3 grid of pixels and storing the result in the middle pixel. The pixels are weighted are as follows:

```
1 2 1
2 4 2
1 2 1
```

'To get this weighting, a horizontal softening routine is applied to the screen, and written back to memory, before applying a vertical routine.

'The real problem is realising that a word of eight pixels is stored back to front with interleaving. So some approximations were made to ignore the interleaving and use the fact that many pixels can be operated on simultaneously to speed up the code.'

*QUIT

Submissions, little and large, morecambe and wise, french and saunders, to the usual address please:

*INFO, Acorn User, IDG Media,
Media House, Adlington Park,
Macclesfield SK10 4NP

or, if your submission is **100K or less**, e-mail us (including your real address please) at: austarinfo@idg.co.uk

You needn't include a letter but **please put your name, address and program title on every disc** and include a text file containing your name, address, disc contents and program details. Saved screens, drawfiles, background information are a delight to behold and an SAE will ensure your discs are returned. *info submissions only please.

Compatibility table

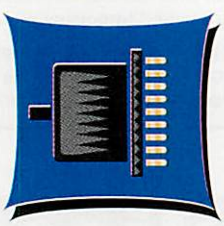
Program	RISC OS 2	RISC OS 3.1	RISC OS 3.5+
1BigFile	No	Yes	Yes
FixGourad	Yes	Yes	Yes
KillPrint	Yes	Yes	Yes
KeyFilter	No	Yes	Yes
RPCInfo	No	No	Yes
Starbase	No	Yes	Yes
PoorJenny	Yes	Yes	Yes
FullFade	No	Yes	Yes
Smudge	Yes	Yes	Yes

Mike Cook's hardware series

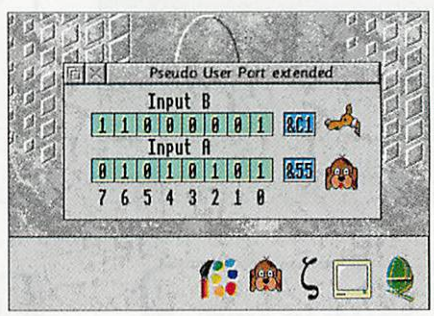
The Phantom User Port



Mike Cook reveals hidden extras inside your computer



The first time I made the cover of *The Micro User* was in the August 84 issue – it was a project about adding extra User ports to the model B. The cover was double exposure of a computer creating a sort of see-through lid, accompanied by the caption 'Reveal those hidden extras'. When I queried this with the editor he said 'I know it's not accurate but we wanted to use that great photograph.'



Well, this month I am going to 'reveal those hidden extras lurking inside your computer', as I show you a Phantom User Port.

Most of my projects make use of the printer port. However there comes a time when you might want to have more than one project running at once and so you need another separate port. Fortunately, there is a port lurking away at the back of your computer that you probably haven't even considered – the serial port connector. You probably think I am referring to serial data but I'm not. Accompanying the serial data lines are seven handshaking lines that can be accessed as if they were parallel lines. Four input lines and two output lines are up for grabs if we want to make use of them.

There is a snag – isn't there always? – the lines are not standard TTL lines. A TTL signal is the zero to five volts type used in the printer port and throughout most of the computer. The serial handshaking lines on Acorn computers are one of two types – RS432 or RS232 – and they swing both positive and negative. The RS232 fitted to the Risc PC have voltage swings between plus and minus 12 volts. The RS432, fitted to the other computers have plus and minus five volt swings. Fortunately the two types are mostly compatible, as the threshold for switching from one state to the other is only about plus and minus three volts.

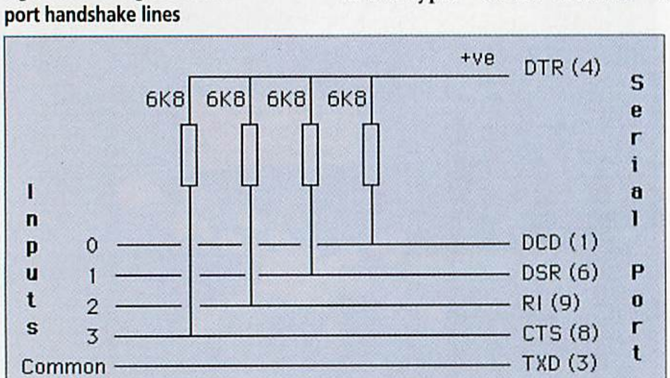
Most digital logic circuits would be destroyed if you fed these signals into them, but a lot of projects need only contact closure inputs – for example the steady hands game in the July 95 *Acorn User*. This is normally done with TTL signals but it needn't be if you can swing the inputs over the required voltage. Fortunately there is a ready built supply of these voltages on the output pins of the serial port. The TXD (Transmit Data) line is held steady at the negative voltage when it is not being used, and the DTR (Data Terminal Ready) line is held at the positive one.

You can use the DTR line to pull up the signals and the TXD line as a common line to pull them down – this is shown in Figure I. I used a 6K8 pull up resistor and found it was the largest value that gave consistent results. Reading the lines is quite simple, just use:

```
SYS'OS_SerialOp',0,0,-1 TO ,,A%
A%=((A%>>18) AND &F) EOR &B
```

The first line reads the status register of the serial chip and the second line puts the bits into the least significant four bits of the variable A%.

Figure I: Reading the serial port handshake lines



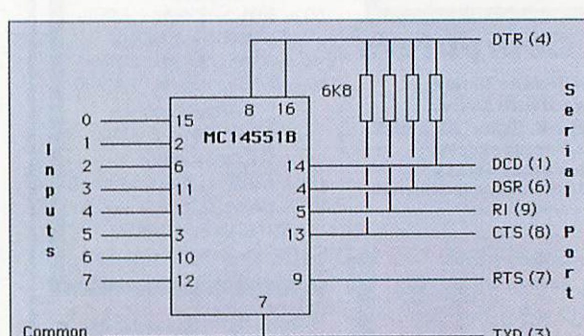


Figure II: Making four inputs into eight

You can see what bit corresponds to what line from Figure 1. Note you need the EOR (exclusive OR) to get the signals the right way round as all but the CTS inputs are inverted.

You can use the system call to set the DTR line, but I found this already set up on power up on the Risc PC. However, on my A310 I needed to issue a *FX2,2 call before the status lines could be read.

That's all very well but most user ports are eight bits not four. Figure II shows you how you can stretch these four bits into eight by using a 4551 analogue data selector chip. Note that this circuit is only for use with an RS432 serial interface because it derives its power from two of the signal lines. The DTR supplies the plus five volts and the TXD the minus five volts.

The 4551 chip can be used with up to 15 volts supply so it is not suitable for use with an RS232, as this would produce 24 volts across the device. There is also another danger with this circuit – the DTR line. If the software were, for some reason, to swing this to the negative rail, there might be some trouble with the output signals being outside the supply. You might get away with it but I haven't tried. So despite the beauty of needing no extra supply this circuit should be avoided by all but the most competent.

As most real logic signals are at TTL level it follows that a TTL input would be desirable for our User Port. To achieve this we need a level converting circuit or line driver being fed by a conventional TTL data selector, as shown in Figure III. This uses a DS14C88 driver to convert from TTL to RS232 levels. This driver chip takes its negative supply from the TXD line and its positive power from a five volt supply. You need this supply for the 74LS158 quad two input data selectors anyway, so it's no hardship. You can use the easier to obtain 74LS157 data selector but you will have to invert the inputs in software.

Unfortunately some types of line driver won't work with a plus and minus five volt supply. I had an MC1488 and that would only work by taking its positive supply from the DTR line as before and then only on the RS232 system. If you are using a substitute, make sure it can be driven from five volts. Some drivers, such as the MAX234, have built in voltage inverters that generate +/- 12 volts from a single five volt rail but these are more expensive and require surrounding in capacitors.

Look at the RTS line in Figure III. This is the line used to switch the data select between the upper and lower nibbles (four bits). It swings below the zero volt line and so we need to catch it with a diode. Also in an RS232 system it goes higher than plus five volts so I have used a transistor to isolate the high voltage. In short, Figure III can be used with any system.

To drive the circuit in Figure III all we need to do is to read in four bits like before when RTS is low and again with it high. I have produced a desktop monitoring application for use with this circuit, and indeed the previous two – it's called !PUP. The initials stand for Phantom User Port but I couldn't resist giving it the icon of a dog I found on the Internet. Note if you use this for the circuit in Figure I you will find the top four bits and the bottom four bits identical.

That last circuit left one output unused and I hate waste, so I designed a circuit that would give two User Ports, using the DTR line to switch between the two. The circuit of this is shown in Figure IV and is a natural extension of the last circuit. Here I use two 74LS153 data selectors – they are dual, four input selectors, giving me a total of 16 inputs. They are switched by the RTS and DTR lines and again feed a line driver.

The software to drive this is very similar and my 'Phantom User Port Extended' or !PUPe application is also on the cover disc. This name also gives me the excuse of using an other cute icon. Please note, don't use this application with Figure II as the DTR line is switched on this. Both applications use the system's null event to update the display every half a second or so. However, in this case there is an odd number of inversions in the hardware so the signals have to be put the right way round in the software.

Another point to note: on my A310 with its 6551 serial chip I couldn't get it to read the CTS line. I have put this down to a faulty chip as the signals change on the pins of the chip itself but the software always reads it as the same value. There is a slight chance, however, that this line can't be used with this chip, in which case you are reduced to having only 12 inputs on such computers and not 16.

Construction can be on veroboard and the layout is not too critical. I have even built this last circuit up so that a box would fit over it. There was plenty of room inside the box, but, despite this, it followed Cook's first law of electronic construction, 'The layout expands to fill the veroboard allotted to it'. Now where have I heard that before? AU

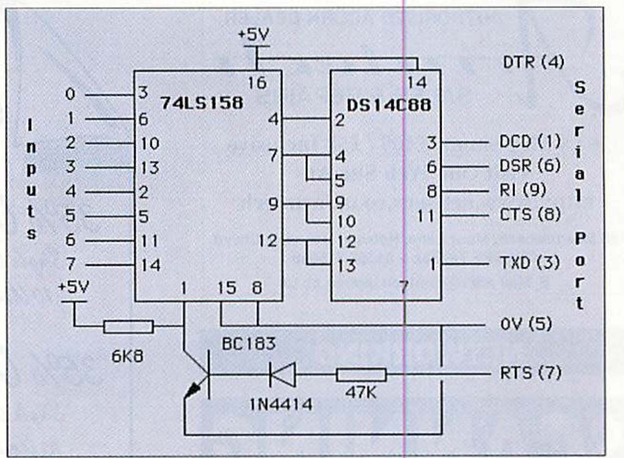


Figure III: Converting the levels to TTL voltages

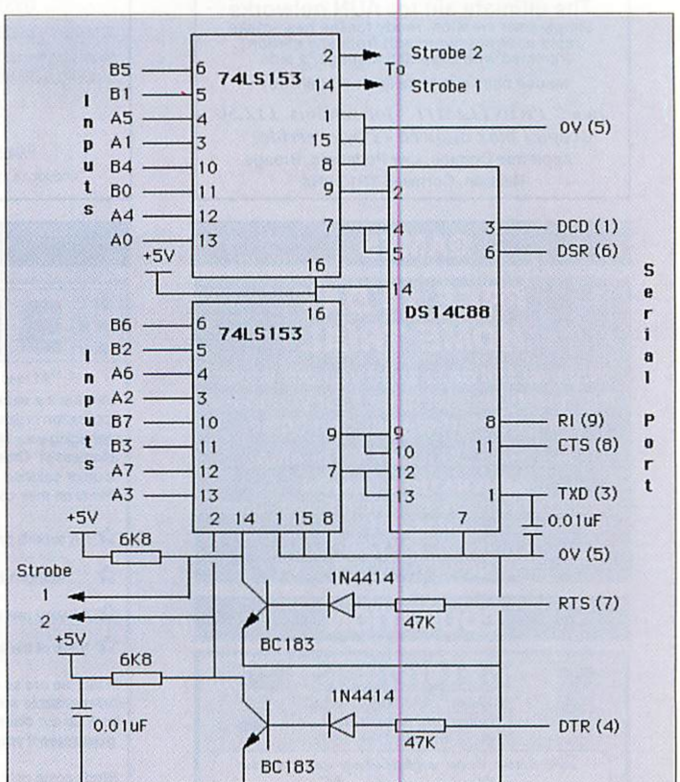


Figure IV: The complete duo phantom user port

SOFTWARE SHOWCASE

DEALER

NETWORKING

GAMES

EDUCATION

BUSINESS SOFTWARE

CLIPART

UTILITIES

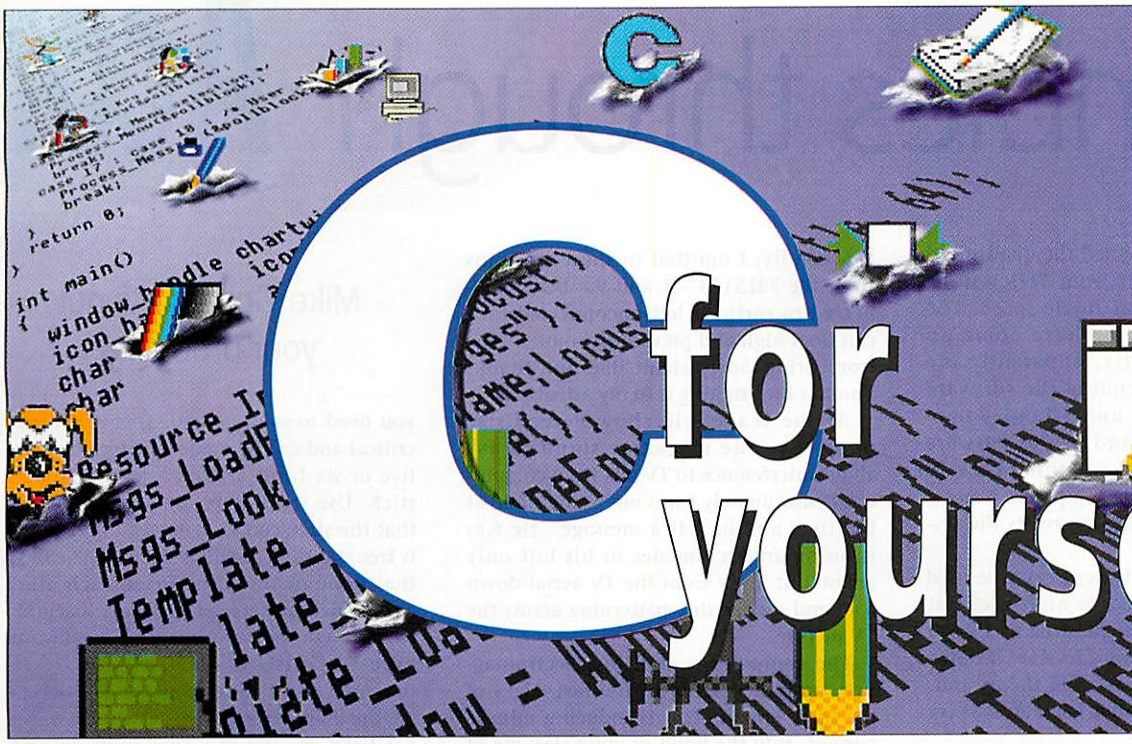
GRAPHICS

PRINTING

ACORN USER

ADVERTISERS INDEX

JACK KREINDLER



C for yourself

Communicating with the user – Steve Mumford continues to build a simple database

Last month, I announced my intention to write a small database application to demonstrate some of the techniques behind WIMP coding. Before we go any further, you might like to take a look at the latest incarnation of the parachute jump logger on the cover disc. It's progressed nicely and although it's not fully functional yet (you can't save or load files), it demonstrates how easy it is to create the basics of a working database.

If you've been following the progress of the *Acorn User* WIMP library, you'll be able to understand the shell of the program without any trouble. As before, I initialised the task, loaded in the templates and provided a basic menu. The next stage was to design the window and note down the icon handles from the template editor – I defined these at the beginning of the sourcecode for ease of use. As well as the fields you can see in the window, there are three other elements in the **jump_data** structure; a unique jump number held as an integer, and two pointers to structures of the same type, allowing us to build a two-way linked list.

When the program starts, a **jump_data** structure is created and both **next** and **previous** pointers set to NULL, indicating that the list ends in both directions. The address of this structure is stored in a global pointer; in this way, we can hold onto the start of the list, and we know where to begin with any operations that need to work through the whole dataset. As records are added, the pointers within that first structure are altered to reflect the shape of the new data tree.

At the simplest level, a user must be able to move between records already in the database as well as add new ones, so I designed the window with the icons to perform these functions gathered at the top. Whenever the user clicks on these icons, our program is sent a **Mouse_Click** message, so it's a simple task to listen for that and move backwards or forwards in the database as appropriate – all we need to do is check the *next* or *previous* records of the current record. If they're not equal to NULL, it means that there's another record at the end of the pointer, and we can move along one step. Otherwise, the request is refused – however, if we're at the end of the list, the user can add another record there and so propagate the chain.

How do we input data? Well, the WIMP handles most of the hard work in this case; the user simply clicks in an icon and types away. The text is held along with the icon information, and we don't have to worry about a thing. This pleasant situation has to end eventually – we need to read the user's entries and store them somewhere more permanent. I've handled this by waiting until the user clicks on the *Add* or *Update* button before interrogating the icons one by one and writing the information into the current structure. As a consequence, this means that any changes are lost if the user alters a record then moves away before clicking *Update*, but a check could be added to the *click* routines of the appropriate icons to prevent this.

This brings us to an important point; icons contain text and text alone, and you'll have to do some data conversion within the program to translate between the string passed back by the **au_icon_get_text** function and the type of variable you want to store. In this example, the altitude and delay are both stored internally as integers, so a quick call to the **atoi()** function in **stdlib.h** sorts this problem out. In case you're interested, the name **atoi()** is a truncation of the phrase *ASCII to integer*.

The two functions that allow you to read and write to text icons are **au_icon_get_text** and **au_icon_text_change** respectively.

They both take three parameters; the first parameter in **au_icon_get_text** is a pointer to an array of characters to which the icon string is copied. Conversely, the first parameter of **au_icon_text_change** is the string that you wish to place in the icon. After that, the parameters of the commands are identical – the second parameter is the handle of the window that contains the icon, and the third is the icon handle itself – easily determined if you've used a template editor to create your windows. For instance:

```
au_icon_get_text(CURRENT_RECORD_POINT
ER->dropzone, win_data[0].win_handle,
DROPZONE_ICON);
au_icon_text_change("Update",
win_data[0].win_handle, UPDATE_ICON);
```

That's all I've got space for this month; next time around we'll deal with drag and drop loading and saving – bye for now.

AU

Rambles through Acorn

Mike Cook sorts out your problems

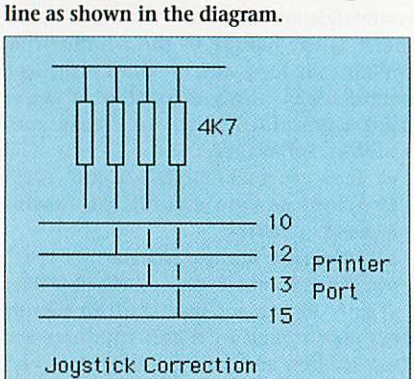
Last month I mentioned the quad speed CD drive I bought from Yellowstone which only worked at single speed. The lads from Yellowstone have come up trumps and have a fix. Apparently the Hitachi drive was sending the software something it didn't understand, something non-standard and so the software responded by setting everything back to single speed. Now there is a patch, if not a cure, as the software always resets the system to quad speed.

This means that *CDspeed can't be used to set the drive speed to anything but maximum which suits me fine as I can't think when I would want to slow it down deliberately. Well, that's the theory but, unfortunately, I have not been able to try it out.

Over the last two weeks I have been told by Yellowstone that they have sent me the software four times. On two occasions software did arrive: the first time there was no difference in performance and the second time it was for their Rapid IDE card. If it does ever get working I will let you know how it performs.

There has been some discussion in this column about the Theramin, an electronic musical instrument invented in the '30s that you play by waving your hands in thin air. Well, I was thumbing through a copy of Future Music and I came across an advertisement for one. You can get them in kit form or ready assembled and there is even a MIDI option. Prices range from £270 to £780 – more information from Second Gear on 0115-978 0582.

Thomas Underwood from York has been having trouble getting my analogue joystick interface from the June 96 issue to work. Sorry but there were two small errors on the diagram. Firstly, the pull up resistors on the fire buttons were all shown as going to pin 10 on the printer port – they each should be taken to a separate line as shown in the diagram.



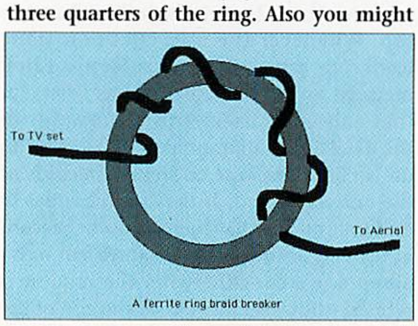
Joystick Correction

Secondly, I omitted to show two pins from the 74LS123 – 1 and 9 – being connected to earth. If left unconnected they can float high and prevent the monostable from firing. Sorry about that and thanks Thomas for bringing it to my attention.

At the Wakefield show Peter Grise popped to the magazine stand to ask about interference to TV sets from computers. Unfortunately I was not at the stand at the time and he left a message. He was running an Archimedes in his loft only about 12ft away from the TV aerial down lead and was getting patterning across the TV picture.

The computer is emitting electromagnetic radiation with all the fast edges of the logic circuit. This is inducing minute currents into the braid or outer sleeving of the down lead. What is needed is a device known as a 'braid breaker' to remove these currents before they enter the TV set. There are many ways to do this, but the two most popular ones are the 'PCB' type and the 'ferrite ring' type.

The ferrite ring type is the easiest to make. All you need is a large ferrite ring and to thread the aerial down lead about four or five times round it. Make sure you don't have the exit wire next to the entrance wire so only go around about three quarters of the ring. Also you might need to remove the aerial plug to get it through the ring, especially for the last turn – see the diagram.

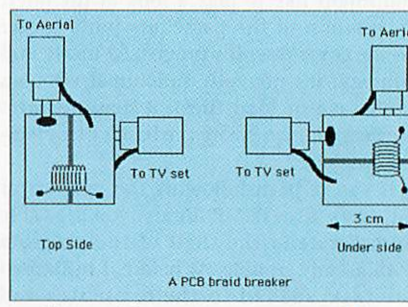


A ferrite ring braid breaker

The only snag with this is that a large ferrite ring is not the easiest component to get hold of. It's also likely to be a bit costly, so for a cheaper alternative use the PCB type. Take a small square of double-sided printed circuit board – about 3cm – and make a vertical saw cut down the middle. Flip it over and make a horizontal saw cut along the centre of the other side, so that if you could see through the circuit board the saw cuts would form a cross. Now solder the aerial lead to each square on one side, flip it over and solder the TV lead to each square on the other.

Finally between the squares on each side you need to solder a coil. This is not very critical and can be made by winding about five or six turns around a 5mm diameter stick. Use thick wire, about 18 SWG, so that the stick can be removed and the coil is free standing. Slightly stretch the coil so that none of the turns touch each other and solder in place. The whole assembly can be wrapped around with insulation tape to finish it off. This should be mounted about 15cm from the TV socket – see the diagram for more details.

I have use the PCB type quite successfully for treating cases of TV interference from amateur radio transmitters. If the problem persists try to contact your local radio amateur group as they often have a wealth of experience in coping with such problems. They may even be willing to lone you equipment so you can test to see if it will cure the problem.



A PCB braid breaker

David Parr who signs himself 'yours desperately' is having a spot of comms trouble:

Last summer *Acorn User* supplied readers, an 'Internet Starter Pack' on four or five separate cover discs. Great I thought. Not so!

After many attempts to dial-up Demon using the !DemConfig application to get a connection I gave up as my machine (A5000) crashed and hung repeatedly. Eventually I gave up.

I decided to dial up my favourite BBS to try to get some help, or maybe even an update of the software. This was not possible! Ever since that last crash/hang, (and subsequent resets), I have not been able to dial out as previously possible. I hadn't experienced any problems dialling out to BBSs for 12 months.

As my modem was an old, slow and second-hand 2400 dinosaur I decided to

Wood Questions & Answers

replace it hoping this would solve the problem. Not so!

After numerous telephone calls to comms experts, no one could offer any help. Eventually I contacted Acorn direct who suggested I pay £115 to return the machine to them so that they could replace the serial port chip as I was told this MUST be the problem area – I wasn't so sure.

"Early A5000s are known to 'blow', but your machine isn't under guarantee Mr. Parr" I was told when I quoted my serial number.

I looked at the 'Sipex SP241' serial port chip. It looked OK to me. I had been informed by a computer engineer at my place of work, that the chip would be coated in a fine film of black dust if it had blown for any reason. I decided it wasn't blown as it looked perfect – I realise this is no guarantee but I'd rather explore other avenues before doing as Acorn suggest and spending my hard-earned cash which wasn't a sure way of correcting my problem.

Next, I discovered an application called !SerTest by Hugo Fiennes/The Serial Port, which tests the connection between computer and modem. The test failed and informed me that there was no modem present, when there clearly was. I have tested my new modem on another machine and it works.

I now do not know who to turn to for help. You are my last resort before I am forced to return my otherwise perfect machine to Acorn.

OK, let's knock this one on the head first of all – you can't tell if a chip has blown just by looking at it. If I were to employ your so-called computer engineer friend, he would get his UB40 instantly. It is much more likely that the line driver or receiver chips have gone than the serial port. This is almost certainly due to some faulty cable wiring.

The test software was not very helpful in saying that there was no modem present – it should have said it couldn't detect the signals that show a modem is present. I have put on the cover disc a program called *RS232stat* – I have found it very useful. This will allow you to see the state of each line on the serial port as well as the state of the input and output buffers. The help file contains some information about how to get a modem working.

The program will test the signals as read back from the serial port's status register. So, for example, you can change the state of the RTS line in the control panel and it will read back the serial port chip to see if it has changed. If you can't change this, then the serial chip has gone.

To test the driver chips you need to look at the output signal on an oscilloscope or LED. If you haven't got one, use the serial port itself to loop back output signals to input lines. An example would be to link the RTS line to the RI line, then as you change the RTS state in the control window the RI input should change at the same time. Do this for all the inputs and outputs.

Finally the price quoted seems high just to change a chip. See if there are any local Acorn dealers where you can take your computer, saving on transport. Check out Norwich Computer services and see if they can give you a better quote. Failing that, you could just refit the chip yourself but I wouldn't get your 'computer engineer' friend to help.

David Shipp chips in with a helpful suggestion:

I am a dedicated Acorn user who has been using Acorns since I was four years old. I'm now 14 and I thought I would respond to the problem Garry Naylor was having with sound modules using !Configure.

Before answering, let me explain that all Sound Modules are recorded at different frequencies. This means that when playing them through !Configure, because it does not change the pitch accordingly, most of them will play too fast or too slow.

To correct this you must change the pitch at which !Configure plays them. This however, is quite difficult. If you just want to listen to them there is a much easier way and that is to use a PD application called !SoundPlay which allows you to play any Sound Module (note, not Sound Module created by Audio Works) at any pitch just by clicking up or down on the relevant icons.

It also has the advantage of telling you the Star Command to use to play *that* sample at *that* pitch in a program written, in say, BASIC. !SoundPlay is written by Jochen Lueg and is true PD. I hope this will help Garry and anyone else who had this problem. If anyone would like to thank me they could do so by sending me a StrongARM card for my RiscPC 600!

And maybe you want Pamela Anderson to deliver it personally to you. Welcome to the real world, you'll have to make do with my thanks. I have included !SoundPlay on the cover disc.

Someone who does get given things is Andy Rose from Croborough. He writes:

I have recently been given access to a serious piece of kit – a Hewlett Packard AO Plotter 7586B – and I cannot seem to find a printer driver that works. I am the proud owner of an A5000 which I think is brilliant, have you any ideas?

Yes, I would take up buying lottery tickets with that sort of luck. However, I doubt if there is a printer driver for this because basically plotters are vector devices and printers tend to be bitmapped. That means a printer is more like a computer screen in that it deals with dots, whereas a plotter deals with lines drawn from one place to the other.

That's not to say it can't be done – it's just harder and very noisy and pen hammering to produce bitmaps from a plotter. There was a plotter driver years ago for the model B but intercepting the VDU calls was relatively simple to do. Now you would need to tap into the Draw module as well.

Your best bet would be to get hold of the manual and use the plotting commands directly in your own software. Does anyone know of such a driver?

In science an experiment that fails is often as important as one that succeeds. Similarly, it is often as useful to know the questions to which the answer is no. Unfortunately Simon Greenhalgh from Glossop has a few:

I have just bought an A3010 2Mb RISC OS 3.1 machine. Can I change the font on the basic desktop – that is path names in the title bars? Where do I plug in a second floppy disc drive? Can I have two RAM discs at the same time?

Strictly speaking, changing font is only supported by RISC OS 3.5. You can't upgrade your machine. You can't fit a second floppy and you can't have two RAM discs. However, the PD software *Memphis* will give a second RAM disc, while *Desktop+* allows font changes. Getting a hard disc would be more cost effective. AU

Back issues

Missed out on one of our previous issues? Now's your opportunity to bring your collection up to date. But hurry: stocks are limited

Issue 162 – December 1995
● Cambridge Om trial ● Internet package ● Acorn's new divisions ● Software for dyslexics ● Skillsware

Issue 163 – Christmas 1995
● Unusual gifts for Christmas ● PD round-up ● Alone in the Dark ● Global Effect demo ● Online Media Technology

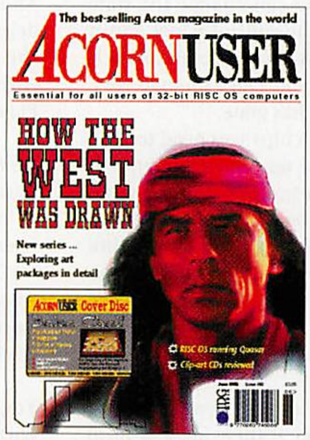
Issue 164 – January 1996
● Hybrid machines ● Travelling with a Pocket book ● Virtual design ● Acorn Educational Products & services Catalogue ● Top Model demo

Issue 165 – February 1996
● Word processing round-up ● The Clan ● Virus protection ● Sibelius at the Royal Academy ● Resource editor demo

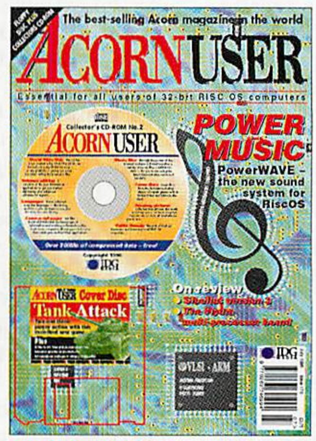
Issue 166 – March 1996
● Video editing ● Multimedia packages ● Graphics applications ● Colour printers ● Alone in the dark demo ● FSCK

Issue 167 – April 1996
● Reviews ● Power DTP ● Acorn Australia ● Swarm ● Float ● Glossary

Issue 168 – May 1996
● Bulletin Boards ● Internet explained ● PD CD-ROMs reviewed ● Demo of Optical



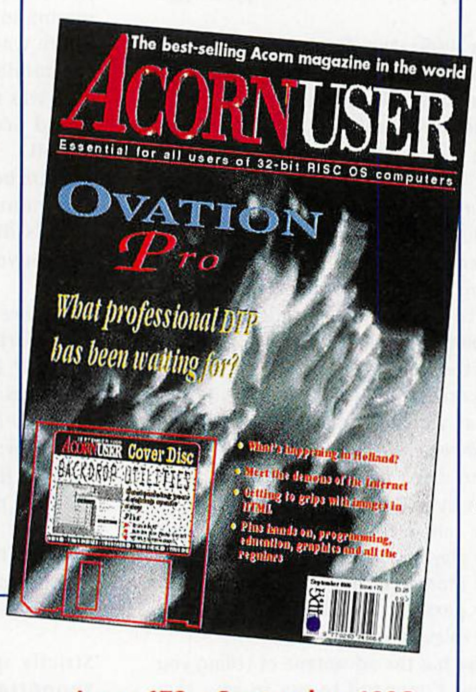
Issue 169 – June 1996
● Hands-on review of Studio 24 Pro ● RISC OS running Quasar ● Clip-art CDs reviewed ● Baka Chal!



Issue 170 – July 1996
● PowerWave ● The Hydra multi-processor board ● Sibelius version 3 ● Acorn User CD-ROM No. 2 ● Tank Attack



Issue 171 – August 1996
● Unlocking the Internet ● Writing HTML ● The Lindis Technology bus ● Set-top boxes ● Ridiculous Rhymes demo



Issue 172 – September 1996
● Ovation Pro ● Printer survey results ● Acorn in Holland ● Images in HTML ● Customising your desktop

Order form

☐ Issue 162, December 1995 .... £3.25
☐ Issue 163, Christmas 1995 .... £3.75
☐ Issue 164, January 1996 .... £3.25
☐ Issue 165, February 1996 .... £3.25
☐ Issue 166, March 1996 .... £3.75
☐ Issue 167, April 1996 .... £3.25
☐ Issue 168, May 1996 .... £3.25
☐ Issue 169, June 1996 .... £3.25
☐ Issue 170, July 1996 .... £3.75
☐ Issue 171, August 1996 .... £3.25
☐ Issue 172, September 1996 .... £3.25

Name ....

Address ....

....

.... Tel No ....

Please allow 14 days for delivery.
Send cheques payable to IDG Media to:
Acorn User Back Issues, Database Direct, FREEPOST, South Wirral L65 3EB
or phone 0151 357 1275
Fax: 0151 357 2813
E-mail: database@dbdirect.demon.co.uk

a *Please tick if you do NOT wish to receive further information or special offers*

ACORN USER guide to local dealers

SURREY

EAST MIDLANDS

WEST YORKSHIRE

SOUTH WALES

MIDLANDS AND OXFORD

CUMBRIA

Subscribe now to claim your free gift or special offer from ACORN USER

the world's number 1 Acorn magazine

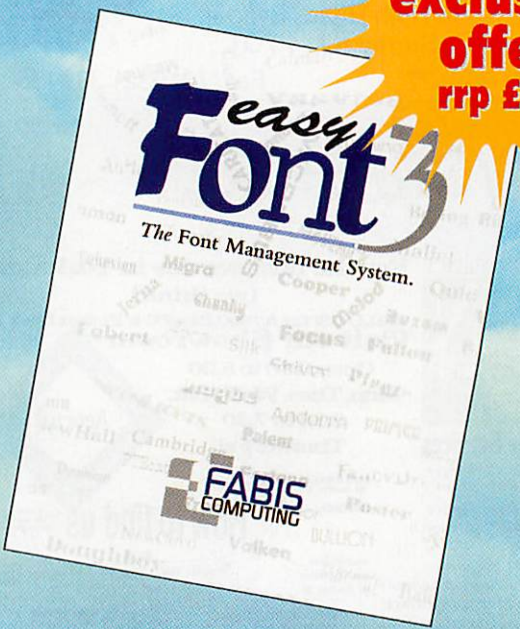
You already know what a great magazine ACORN USER is. After all, we've been the main source of information for all Acorn enthusiasts for the past 13 years.

What you might not know is that by taking out a subscription today, not only are you guaranteed never to miss an issue of the biggest and best Acorn magazine in the world, but you can also claim an excellent free gift or special offer, available exclusively to all new ACORN USER subscribers.

As an Acorn User subscriber you'll benefit from:

- Free delivery, every issue, direct to your home
- One of our amazing free gifts or special offers

Only £10 exclusive offer rrp £35



EASYFONT 3

Gives flexible control over your fonts; WYSIWYG display window; up to 40% space saving on your hard drive; specifically designed Font Filing System giving maximum power and flexibility; the ability to create countless new styles quickly and easily; and the elimination of the dreaded 'Font not found ' errors.

FREE

BINDER & TWO FREE MAGAZINES



Exclusive to Acorn User this binder will hold up to 13 issues of your favourite magazine. PLUS receive an extra two magazines absolutely FREE!

SUBSCRIBING HAS NEVER BEEN EASIER

DIRECT Debit

Why not make your subscription even easier and subscribe by direct debit, spreading the cost of your subscription over quarterly hassle-free payments. What's more, you need never worry about missing an issue again, as the subscription continues until you decide to cancel.

Letters



Acorn's time to shine

It is with regret that I agree almost entirely with the rather dismal comments made by Jim Belsey in the August issue of *Acorn User*. Future without the redeeming air of cheerfulness which envelops the Acorn scene is unthinkable.

However, I felt it would be a good idea to forward this snippet of text which comes from a Java programming book entitled *Just Java*, published by The Sunsoft Press. From the Future Developments chapter of the weighty book, I found this pleasing and all too truthful item about Acorn and its developments inside Oracle's network computer.

"Acorn is an enormously capable British computer engineering company. They have been held back by their small size and limited installed base, but have a long track record of innovative and well-thought out designs."

I believe this is the most valid comment I have read outside the Acorn publications scene. Perhaps for once, Acorn will not be "held back". Perhaps for once they will shine – show the world something which will impress them. I truly believe that the next couple of years are a major turning point for Acorn. They will either succeed with a bang, or fail in a whimper.

Greg Scott (by e-mail)

Question time

I would be very grateful if you could answer my questions. I own a Acorn A3010 with two megabyte of memory and no upgrades. For the last year I have been doing a computer course at college and have been using 486 PCs. We were using Word 6, Lotus 123, GW-basic and Dbase, Apart from Word 6, I was able to run all these via my PC Emulator, PCEm which came on floppy disc.

The problem is that next year we will be using more up-to-date software such as Excel, Power point, Microsoft Office and other software which is Windows only. At first I thought that there was no way I could run Windows on my machine. However, my cousin recently bought the same machine and was told by the shop staff that if he upgraded his Acorn to four megabytes of RAM and purchased a hard drive he could run Windows 3.1. Is this possible? If so it would help me a great deal.

On the subject of hard drives I was astonished to find that the price of a 120Mb drive was a wallet-bursting £195. This is ridiculous. You can actually buy a A3010 for less. The company I phoned said that you needed some sort of upgrade to connect the hard drive. What is needed to fit one and where does it go? If I did purchase a hard drive could I use virtual memory to boost my machines RAM up to 4Mb? This way I would not have to spend money on an extra 2Meg.

Something that did concern me about the PC emulator was the speed. Even GWBasic ran at a very slow pace. The other thing that was even more worrying was when I loaded Dizzy (which is one of the few games that does not crash), the colours of the game were all messed up. They were all an orangey colour and looked awful.

Do you know of any ways I could speed up the emulator and sort out the colour problem. I was wondering if you could tell me if there is any way I can transfer the data from Excel to the spreadsheet on Advance. A mate at college says this is possible on an Amiga and considering that its possible with text there must be a way of doing it with spreadsheets.

My final question is concerning Simon the Sorcerer. The problem is that the game will not save. I go to the save option and it tells me to insert a disc, I insert a disc which has just been formatted and the disc drive light comes on. It is at this point that the game freezes. Although I can move the mouse pointer around the screen I cannot click on anything and have to reset the machine. When I first discovered this problem I sent it back to the shop and got a replacement but I still got the same problem. The shop then told me to phone GamesWare and they sent me an upgrade which affected discs 1 and 6 but still got the same problem. Have you got any idea what this problem could be and how to get rid of it?

M. Green, Lincoln

It is feasible to run Windows 3.11 on the PCem software but it's very slow. And you will need to expand your RAM to 4Mb, there is no substitute — even if you could use virtual memory that would make the whole thing even slower.

You also very definitely need a hard disc as Windows 3.11 will not run off a floppy. The price quoted for an A3010 hard disc sounds about right because of the special interface required. However I doubt 120Mb would satisfy the requirements of all the PC software you need to use. The colour problem will persist.

The A3010 cannot be upgraded to take a PC card, although an A3000 can and you can get these quite cheap now. Quite seriously you are between a rock and a hard place on this one. If you want to run PC software viably you will have to change your machine.

The Advance spreadsheet should simply import Excel files and your problem with Simon the Sorceror is not something we've come across.

Future in doubt

I never thought I would ever say this, but the Acorn scene is really beginning to bore the pants off me. I am fed up with the way things are going, and I thought that if I didn't write a letter and let off some steam I was definitely going to explode.

Firstly, the reason I like Acorns in principle. I am currently using an 8MHz A3000, running Impression Publisher. The processor technology is nine years old, and yet I can run almost all recent software at an acceptable speed. If I had a PC with a nine year old processor (what would that be, a super 286?) then I would be as well putting it in the bin. In fact, I'd have spent many times the purchase price on RAM, hard disc drives, new motherboards and processors, and so on.

Now the reason I don't like Acorn at the moment. I'm an engineering student whose study (and more recently, summer industrial placement) have involved PCs. Okay, Silicon Graphics turbo charged workstations as well, but mainly Windows machines.

The A3000 I have has a small problem – it emulates your average seventeen year old in an XR3i – it crashes all the time, and even more often during games. Little lines of four dots appear all over the screen, then the address exception errors come, or the sound goes haywire, all culminating in a total freeze. Suffice to say I want a new machine, and in a year or two, as I get further into my degree course, I could very well need Windows compatibility.

'Risc PC' I hear you cry. Don't be silly. We are looking at over £1500 to get a usable Risc PC with a 486 card, and enough memory to run DOS and Windows. Even if I didn't need to run PC software like Autocad Lite, I still would hesitate before buying a computer for £1000 when, in your very own magazine, there is an advert of a 586 PC clone for £499 + VAT.

A further problem with investing £1000, £1500 or whatever, in Acorn technology is the doom and gloom in the Acorn market. The lethargy from companies. The pessimism from reviewers and letter writers like myself. There has not been a single significant update for at least a year to Impression, ArtWorks, Advance, FireWorkz, RISC OS (actually in the last five years in the case of our beloved OS)...need I go on?

These packages are the mainstream of our market, and top marks to Beebug for bucking the trend with Ovation Pro. However, I'm an Impression user, and although happy with what I've got, I am disappointed at the lack of movement recently, If what I have heard about Computer Concepts chucking the Acorn for the world of Windows is true, then woe betide Acorn's chances in the DTP niche. (But let's face it, they don't seem to care too much about that potential money-spinner anyway).

Look at old issues of *Acorn User*. They were full of reviews of good, big commercial packages. Now look at August 1996. No big reviews. It's full of features, but no reviews. That's not your fault, because there is nothing to review. The games market is absolutely dead. As dead as a woolly mammoth buried under twenty feet of ice in northern Canada.

The Fourth Dimension (who, it must be said, went downhill with big sounding releases that failed to deliver, like E-Type 2 and Birds of War) are a nobody now. Krysalis are gone, ending the stream of decent game conversions — then they had the cheek to put out an advert in your magazine for Acorn programmers to defect to other formats. If there's anyone out there writing a decent game with a bit of polish then please let the rest of us know.

Even Acorn are getting lethargic about their computer systems. StrongARM may be great, but it's nothing to do with Acorn. It is ARM Ltd and Digital who made it, and they will sell it. Acorn will buy the technology like anyone else. In fact, the technology in a Risc PC with a StrongARM is first rate, but there seems to be an ever decreasing number of software houses prepared to support it – and with no plans for a RISC OS 4, neither are Acorn willing to make an investment.

The only area that is moving is graphics, but once the enthusiasm for 24-bit colour runs out, this will come to a halt too. It seems that once people have all bought a package in its first or second incarnation, development stops because there is insufficient return on the required investment to continue developing the software.

People (like the writers of the letters featured last month) will condemn me for being so dour, but I am afraid it seems like the reality. All the feel-good letters appearing in your magazine are all about how great the current operating system and software are but for just how long do they expect it to last? More to the point, is it worth paying up to £1000 extra when I inevitably replace my A3000 just to find out?

A. S. Brown, Glasgow

The reason we included this letter is because it does typify what many people in the Acorn market are feeling at the moment. Unfortunately Acorn are trying very hard to correct this opinion and we're doing our best to help them.

The first point I'd like to make is that your A3000 is broken, that's why you're got problems. I don't think it's entirely fair to complain at Acorn because, as you point out, the machine is eight years old. The symptoms you describe sound like there's a break in the circuit board somewhere. It's a Mike Cook sort of problem.

Also expecting your A3000 to perform as well as current machines is equally unreasonable. If you can't bear to upgrade your A3000 don't complain when it doesn't perform as well as machines that run twenty times faster.

Moving on to the more general points:

Yes the game scene is quiet. But it isn't dead, there are many games on the verge of release, you just need to read the Game Show pages to know that. As for businesses moving out of the Acorn market, well they are not there from altruism and if a market is not cost-effective the company will cease to exist completely.

Better they move out temporarily and continue to exist with the opportunity to return. And I think they'll be back, check out my article on Page 46 to see why.

As far as graphics development is concerned — you can't have it both ways. Either there's a market or there isn't and the fact that killer 3D graphic apps are being developed, and sold, shows that there is a market.

Finally Acorn's future plans – for much of it they just can't tell us because of contractual confidentiality clauses. But it's no secret that they have so many deals with multi-billion dollar global corporations that they're almost having trouble keeping up. Check out the interview articles in this issue.

To quote Acorn's PR company: "The future's so bright you need shades."

The Regan files



Herman Corijn and Willem van Duijn

I t doesn't feel as though I'm on mainland Europe. I haven't seen or felt the sea, but thanks to the wonders of *Le Shuttle* I am somewhere in the deepest Netherlands. This is one of my more surreal days: the Dutch team is still in the Euro '96 circus (orange flags, t-shirts and bow ties are everywhere), and I am about to interview two Dutch men, despite the fact that I cannot speak or understand any Dutch except for *nee*, and I have a creeping suspicion that I owe even this to Monty Python.

Willem van Duijn is the *Penningmeester* and Herman Corijn the *public relations functionaris* of the Big Ben Club, the Dutch Acorn users' group (I can translate these titles for myself, luckily).

I first met Herman last year at Acorn World, when he related the Big Ben Club's incredible journey to travel to the show, involving night ferries and over 60 people. From then on it was my mission to visit these people and find out why they had this dedication to Acorn.

'The Big Ben Club was started in 1983,' explains Willem. 'In the beginning it had 3,500 members, but it has declined since then. The reason is that most major companies here in the Netherlands are giving incentives and opportunities for their employees to buy cheap PCs.

'One of the reasons for this is that the Dutch government has encouraged Dutch companies to use computers with Dutch components. You must remember that Phillips is Dutch and a company that size can influence people. While at first there were not many Dutch language programs on PCs there, now there are more and this is what the Dutch education system wants.'

It is a shame that the English government does not have the same approach to English companies as the Dutch government has to Dutch companies.

Herman explains why he feels that Acorns are nonetheless still popular in the Netherlands: 'I like to think that the Dutch as a nation have eclectic taste; this is why Acorn has been so popular. People still use the English versions of software such as *Impression*. This is because it is very difficult to translate certain words – for example 'default' into Dutch. People are used to using it in English.

'I started back in 1985, when I did a computer course. With the course they offered a computer – the choice was from a Commodore, a Spectrum and an Electron so I chose the Electron and it came with a leaflet enclosed about the Big Ben Club. I joined and now as a committee member one of my tasks is to ensure the Big Ben Club is publicised properly'.

The Big Ben Club tries to create a platform for its membership, which is divided in to several regions. These regions organise their own evenings when they come together. The Big Ben Club runs several non-commercial training courses, which cover things like programming the Acorn, or using *Impression* and *ArtWorks* software. If you have a problem with your own machine you can just ring round other members until you find someone who can sort you out.

The Arm Club was at the Big Ben-organised Utrecht show and seem to fulfil a similar role, I wondered if the two clubs had any ties:

'This is the first time we have met any one from the Arm Club. They seem more commercial than us; they are selling lots of programs and even a CD-ROM. All we have for sale are public domain discs and Big Ben merchandising such as t-shirts and disc boxes.

'We do publish a 10-issues-a-year magazine called *Asterisk* in which we have all the latest news, top tips for our members and activities which are going on in all the Big Ben Club regions. We also have our own bulletin board, and we sponsor two others, plus of course a page on the internet too.

How does the Big Ben Club envisage the future? Herman takes the lead here.

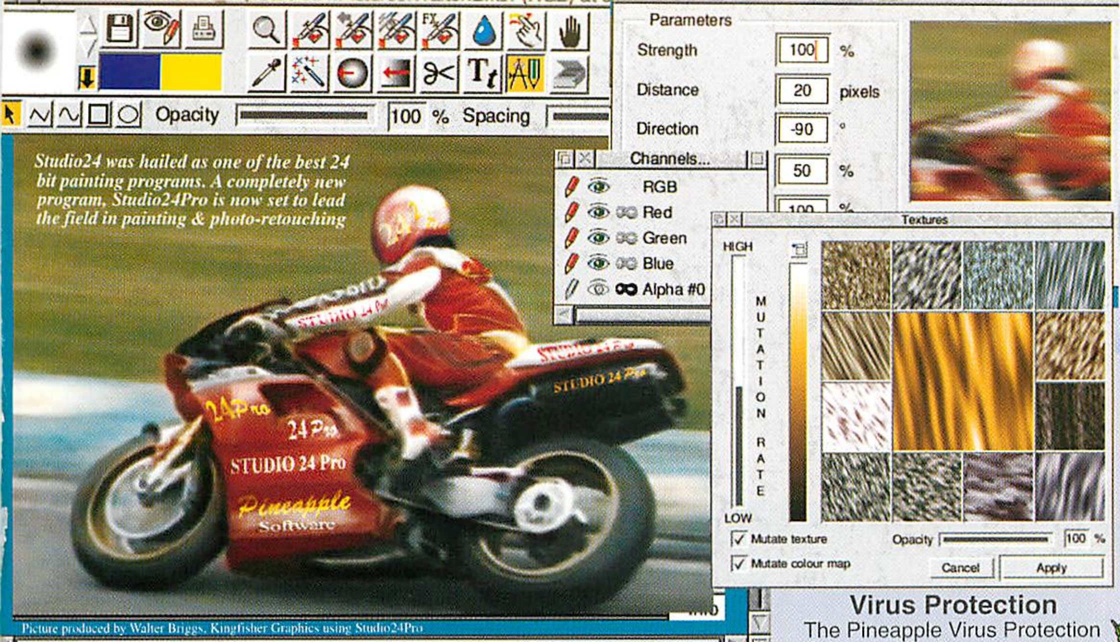
'I think the recent happenings at Acorn are good and it means that there is a future. I think that it is a bit late and it would have been better a few years ago. It is a shame that the English government does not have the same approach to English companies as the Dutch government has to Dutch companies.

'At least the Dutch are supporting Acorn-based technology; the Dutch Broadcasting Company has just decided to use an autocue system which is based around the A7000 technology. We look forward to more years of Acorn and less of the Bill Gates empire. I do admit that the Gates PR exercises were good but with that much money they should have been.'

There could be another reason why ART did well at the show. With its infamous orange t-shirts, it looked almost as though it was supporting the Dutch in Euro '96.

It's a funny old world.

Jill Regan AU



Picture produced by Walter Briggs, Kingfisher Graphics using Studio24Pro

Features

* Fast Virtual Memory
* Random mutated texture generation
* Undo brush, Texture and Filter brush
* Over 40 pre-defined filters including Spin blur, Motion blur, Lighting etc, etc.
* PhotoCD and Scanner input
* Merging of Sprites, Jpegs, Tiffs & Draw files.
* Built in Draw file creation
* RGB, CMYK or Indexed channel modes
* Up to 16, 8 bit mask channels
* Filter preview window (shown above left)

'Many Acorn User front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool'. - *Acorn User March 96*

Studio24Pro
£149.87 inc vat



Removable Harddrive System
Total Data Security & Harddisc Backup

The removable harddrive system fits into a 5¼" drive slot in the RiscPC and harddrives are available in many sizes which can simply plug in and out of the slot as required. The drive may be locked in place to prevent unauthorized removal. For total security the drive may be removed and stored in a safe place to prevent unauthorized access to your data. Because the removable drives are available in any size (up to at least 4Gb) they are also ideal for use as backups for existing harddrives, and may be easily transported between different computers for rapid transfer of large datafiles. The system is available for use with both IDE and SCSI filing systems. External boxes are available to enable SCSI removable drives to be used with older Acorn models. Please 'phone for details. See opposite for prices.

PAL TV Coders



PLC/3 £104.57



AVK/3 £355.00

The PLC/3 PAL TV Coder works in any of the 'Standard' Modes, e.g. mode12 and 15 on all Acorn computer models. The PLC/3 has a 15 pin RGB output for the monitor, a BNC for video and an S-VHS connector for S-Video. The PLC/3 will work with RiscPC computers although the AKF60, AKF85 and AKF90 will not work at the same time.

The AVK/3 will work with all computer models in all screen modes up to 800 x 600 resolution in 16 million colours. It has a remote control with facilities for zooming, freezing & panning the TV picture. Ideal for lectures and demonstrations etc. The AVK/3 includes all connecting cables including a SCART which gives TV frequency RGB O/P for large screen TV's, a phono socket for composite video and an S-VHS socket for S-Video.

ArtWorks Video Tutorial



A Brand new product from Pineapple is this VHS Video Tutorial covering the use of ArtWorks.
Walter Briggs is the tutor for this 1 hour video which shows how to use all the ArtWorks tools and then goes on to show how Walter produced his famous Tiger head picture. Walter also draws an impressive landscape picture which can be copied by those with no artistic talent at all!

ArtWorks Video Tutorial £19.99

24 Bit Colour Scanners



Pineapple can offer a wide range of Flatbed A4 colour scanners starting from as low as £359 including software and VAT!
The Epson range is currently the most popular although Canon are expected to release a new scanner to replace their IX-4015 shortly. The cheapest in the Epson range is the GT5000 with an optical resolution of 300dpi. This is adequate for virtually all home use. The GT5000 is available with either a parallel or a SCSI interface. The GT8500 has an optical resolution of 400dpi and comes with both parallel and SCSI interfaces. Finally, the GT9000 is the top of the range with an optical resolution of 600dpi and both parallel and SCSI interfaces. Imagemaster and Twain software are included in the price, but we also offer our Studio24Pro Photo re-touching software at just £80.00 inc vat with every scanner purchase.

Virus Protection



The Pineapple Virus Protection Scheme will allow you to detect and remove over 100 viruses from your Acorn computer.
'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternatives.' - *Acorn User Feb 96*

Multimedia Speakers

Yamaha 10 Watt	YST-M10	£63.00

A4 Colour Scanners

Primax Flatbed A4	£359
Epson GT5000 (parallel)	£425
Epson GT5000 (SCSI)	£499
Epson GT8500	£569
Epson GT9000	£699

All scanners include Imagemaster & Twain. Studio24Pro at just £80.00.

A7000 Computers

4Mb	HD540	14" Mon	£1069
4Mb	HD540 CD	14" Mon	£1159

RiscPC 600 Computers

4Mb	HD540	14" Mon	£1275
4Mb	HD540 CD	14" Mon	£1375
4Mb	HD540	17" Mon	£1675
4Mb	HD540 CD	17" Mon	£1775

RiscPC 700 Computers

5Mb	HD540	14" Mon	£1525
5Mb	HD540	17" Mon	£1900
5Mb	HD540 CD	14" Mon	£1600
5Mb	HD540 CD	17" Mon	£2025
10Mb	HD1Gb	14" Mon	£1750
10Mb	HD1Gb	17" Mon	£2100
10Mb	HD1Gb CD	14" Mon	£1850
10Mb	HD1Gb CD	17" Mon	£2250

PC Cards

	Separately	with RiscPC
SXL-33 Card	£233.83	£116.32
DX2-66 Card	£289.00	£169.00
DX4-100 Card	£349.00	£229.00
586-100 Card	£468.83	£351.32

CDRom Drives

x8 Speed CDRom	£120.00

Memory Upgrades

1Mb to 2Mb Vram	£116.32
2Mb Vram	£233.83
4Mb SIMM Ram	£ 23.50
8Mb SIMM Ram	£ 44.06
16Mb SIMM Ram	£ 91.05
32Mb SIMM Ram	£186.82
RiscPC Sound Card	£70.44

'Phone for latest SIMM prices !!

All our prices INCLUDE 17.5% vat & delivery!

Printers



Citizen Print*iva* 600C

Citizen		
PRINT*iva* 600C		£399.00
Hewlett Packard		
Laserjet 5L	4ppm	£458.00
Deskjet 600		£215.00
Deskjet 660	colour	£315.00
Deskjet 850	colour	£415.00
Canon		
BJC610	col 720dpi	£415.00
BJC4000	colour	£276.00
BJC4100	col 720dpi	£276.00
BJC200	mono	£205.00
BJC210	(col option)	£222.00
BJ30	360 x 360	£165.00
Epson		
Stylus Colour II		£329.00
Stylus Colour IIS		£244.00
Stylus Pro XL+ (A3)		£1079.00

3.5" Bare Harddrives

540Mb	IDE	£125.00
850Mb	IDE	£139.00
1.2Gb	IDE	£165.00
1.2Gb	SCSI	£225.00
2.0Gb	SCSI	£370.00
4.2Gb	SCSI	£665.00

Removable Harddrives

IDE Mounting Kit		£ 25.00
540Mb	IDE	£145.00
850Mb	IDE	£159.00
1.2Gb	IDE	£185.00
SCSI Mounting Kit		£ 29.00
1.2Gb	SCSI	£235.00
2.0Gb	SCSI	£390.00
4.2Gb	SCSI	£685.00
External Mounting Box		£ 89.00

SCSI Systems

SCSI Card	£116.32
SCSI Internal Cable	£ 9.99
SCSI External Cable	£ 19.99
SCSI II Card	£189.00
SCSI II Internal Cable	£ 9.99
SCSI II External Cable	£ 22.32

Monitors

14" 0.28mm SVGA	£189.00
15" 0.28mm SVGA	£309.00
17" 0.28mm SVGA	£556.00
21" 0.28mm SVGA	£'Phone
29" 0.75mm SVGA	£1150.00
Ilyama Visionmaster	
17" 0.26mm MF8617E	£635.00
17" 0.25mm MF9017E	£699.00

20 : 20 Finance available on all RiscPC's

Studio24Pro at just £49.00 with any RiscPC purchase
Studio24Pro at just £80.00 with any colour scanner
FREE membership of the Virus Protection Scheme with any RiscPC

!! Special RiscPC offer !!

A Quad speed CDRom drive for just £60 with any RiscPC

Pineapple Software
Suites 13 & 14
South Park Business Centre
310 Green Lane, Ilford
Essex IG1 1XT
Tel 0181 599 1476 Fax 0181 598 2343
email:- sales@pineaple.demon.co.uk

Terms:- All prices ***include*** 17.5% vat. Carriage FREE to mainland U.K. Phone for quote outside U.K. Official orders, cheques and all major credit cards accepted. Money back guarantee on all products.

'Pineapple offer some of the finest and friendliest after-sales support you will find' - Acorn User Mar 96
Why not come and visit us (easy parking) where you can see most of the Acorn range of computers and other hardware in action.
Monday - Friday 0900 - 1730

Acorn CENTRES OF TECHNOLOGY

ATOMWIDE

Sharing printers over a network sounds like a great idea, but dedicating computers to the task of printer serving is clearly a waste of valuable resources.

The Atomwide Network Printer Adaptor simply connects between any available Ethernet socket and a printer, and so allows printers to be located wherever they are required. The Adaptor is managed by an Acorn SchoolServer or other Microsoft Windows NT fileserver, so removing the need for a dedicated printer server.

Network Printer Adaptor



multi-protocol & Server options

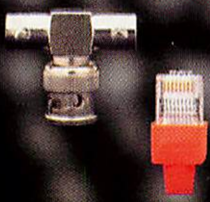
- ANT OmniClient ®
- Unix TCP/IP
- Netware IPX
- Microsoft Windows NT
- Sun Solaris



Product features

- Power LED
- Status LED
- Flow / Link LED
- Parallel Centronics connector
- Separate power supply
- 60mm x 30mm in size

multi-connect options



- 10baseT
- 10base2

Single port adaptors cost as little as £199 and can be installed in minutes, giving fast and simple network printing.

Another part of Atomwide's "Complete Solution".

Atomwide Ltd, 7 The Metro Centre, Bridge Road, Orpington, Kent. BR5 2BE
Tel 01689 814500 Fax 01689 814501 Email sales@atomwide.co.uk
http://www.ant.co.uk/~atomwide/ ftp://ftp.ant.co.uk/